144 MHz FM HAND HELD TRANSCEIVER

DJ-120T/E

Service Manual

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ALINCO ELECTRONICS INC.

■ SPECIFICATIONS

<GENERAL>

Frequency coverage 144.0-147.995 MHz (DJ-120T)

144.0-145.995 MHz (DJ-120E)

Frequency step 5 kHz (800 channels) (DJ-120T)

12.5 kHz (160 channels) (DJ-120E)

Antenna Impedance 50 ohms, unbalanced

Operating voltage 5.5 to 12 vdc

Operating Current

(typical at 7.2 vdc) Battery save 15 mA

Squelched 42 mA
Max. audio out 98 mA
Transmit HI 750 mA
Transmit LO 350 mA

Battery charging time 14-16 hours

Dimensions 6%" (H)×2%" (W)×13/16" (D)

Weight: 0.55 lbs.

<RECEIVER>

Type Dual conversion;

1st IF 21.6 MHz; 2nd IF 455 kHz

Sensitivity: Less than .25 µV @12 dB SINAD

Spurious response Rejection ratio ... More than 60 dB

Selectivity: More than ±7.5 kHz at -6 dB

Less than ±15 kHz at -60 dB

Squelch sensitivity: Less than -12 dB

Audio output More than 200 mW (10% THD), 8 ohms

<TRANSMITTER>

Output power See table

Modulation Variable reactance FM

Microphone: Built-in electret condenser

Operating modes: Simplex

Shifted + or -600 kHz from receive frequency

RF POWER OUTPUT TABLE					
Battery	н	LO			
EBP-6NAZ	4.5 W	600 mW			
EBP-7NAZ	2.5 W	450 mW			
EBP-8NAZ	6.5 W	850 mW			
EBP-9NA	2.5 W	450 mW			

Specifications subject to change without notice.

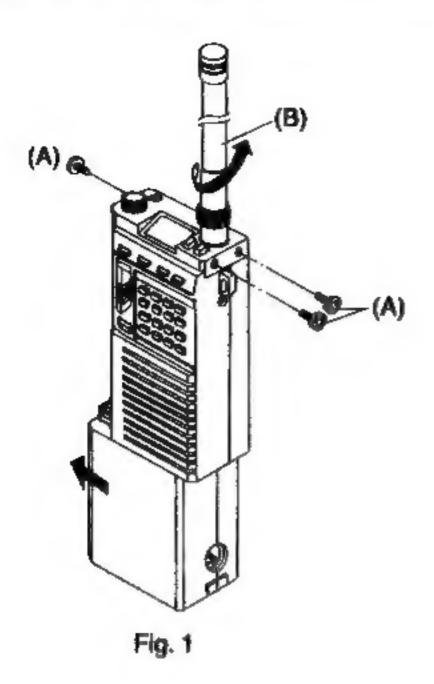
■ PARTS LIST

Ref. No.	Parl Code	Part Name and Number	Ref.	Part Code	Part Hame and Humber		Flet. No.	Part Code	Part Name and Number
		SW Unit	R122	WX3054	Chip R., MCR03 22 kΩ	76	C225	CU3054	Chip C., CM105W5R223K25VA
			- R123	PIK3088	Chip R., MCR03 220 kΩ		2226	C80049	Chip Tantal, TMC 1C105 TR
	EL0003	LCD, EL0003	R124	RK3056	Chip R., MCR03 33 kQ		228	CU3019	CNp C., CM105CH470K50VAT
	XD0071	Diode, FMP1	P125	PK3034	Chip R., MCR03 470Ω	1 1	1	CD8003	Chip C., C2012Y5V1E104ZT
V1	UU0007	Tect SW, EVQ-QEC 04K	R126	RK3001	Chip R., MCR03 00		C231	C80052	Chip Tantal, TMC 1A336 TR
16	UQ0011	Push SW, ESB-64601	F1127	PK3052	Chip R., MCR03 15 kΩ	1	C232	CU3031	Chip C., CM105W5R471K50VA1
1	RV0011A	VR, V108-1 (PVB) \$ (\$J)	R128	RK3050 RK3050	Chip R., MCR03 10 kΩ Chip R., MCR03 10 kΩ	1 1	C233	C80051	Chip Tantal, TMC 1C106 TR
	4100430	13-1FF15A10K	R129	PIK3050	Chip R., MCR03 10 kΩ	1.1	234	CU3035	Chip C., CM105W5R102K50VA1
	UP0179	SUB SW P.C.B.	R130	PK3014	Chip R., MCR03 10Ω	1 1	235	CU3024	Chip C., CM105CH121K50VAT
		CPU Unit	R132	RK3030	Chip R., MCR03 220Ω		238	CU3039 CS0049	Chip C., CM105W5R222K50VAT
	_	0.00	R133	RK3051	Chip R., MCR03 12 kΩ		2239	CU3031	Chip Tental, TMC 1C105 TR Chip C., CM105W5R471K50VA1
01	XA0100	IC, µPD7502G	R134	RK3062	Chip R., MCR03 100 kΩ			CU3031	
02	XA0059	IC, BA6993	R135	RK3082	Chip R., MCR03 100 kΩ			CU3052	Chip C., CM105W5R471K50VA1 Chip C., CM105W5R109K25VA1
01	XE0004	F.E.T., 2SK209GR	R136	RK3062	Chip R., MCR03 100 kΩ	11		ODOUGE	Crap C., Can I Cotton Tobic 25 VA
01	XD0071	Diode, FMP1	R137	RK3031	Chip R., MCR03 2700	1 6	1201	MK3050	Chip R., MCR03 10 kΩ
02	XD0071	Diode, FMP1	R138	RK3031	Chip R., MCR03 270Ω			RK3042	Chip R., MCR03 2.2 kΩ
03	XD0071	Diode, FMP1	R139	RK3052	Chip R., MCR03 15 kΩ	1.4		RK3050	Chip R., MCR03 10 kΩ
04	XD0040	Diode, DAN 202K	R140	RK3001	Chip R., MCR03 00 (E only)	1.1		RK3050	Chip R., MCR03 10 kΩ
15	XD0109	Zener, RLZJ 5.18JB	F1146	RK3001	Chip R., MCR03 OC			RK3050	Chip R., MCR03 10 kΩ
8	XD0060	Dolde, RB400D	R161	RK3001	Chip R., MCR03 0Ω (Tonly)			AK3050	Chip II., MCR03 10 kΩ
07	XDOOGO	Dolde, RB4000	R162	RK3001	Chip R., MCR03 0Ω (Tonly)			RK3038	Chip R., MCR03 1 kΩ
,	XL0016	LED SLM-13MW (T only)						RK3050	Chip R., MCRO3 10 kΩ
	XL0016	LED SLM-13MW (T only)			AF Unit	11	1	RK3034	Chip R., MCR03 470Ω
/101	UU0007	Tact SW, EVQ-QEC D4K	1	7		4		RK3042	Chip R., MCR03 2.2 kΩ
/102	UB0012	Slide SW, SSSS 21382A	IC201	XA0061	IC, NJM386M	11		PK0106	Chip R., MCR102.20
103	UU0007	Tacl SW, EVQ-QEC 04K	IC202	XA0068	IC, M5218FP-T01-1	1.1		RK3038	Chip R., MCR03 1 kQ
104	UU0005	Tect SW, EVQQJR02K						PK3044	Chip R., MCR03 3.3 kG
1105	UUOOGS	Tact SW, SKHMPD1	Q201	ХТООЗВ	Transistor, 2SA1037KR	1 1		RK3050	Chip R., MCR03 10 kΩ
	UP0191	CPU P.C.B.	Q202	XT0037	Transistor, 2SC2412KR	1		RK3050	Chip R., MCR03 10 kΩ
101	EY0003	Mc, EM-6B	G203	XT0061	Transistor, 2SB1132Q 7100	1 1			Chip R., MCR03 4.7 kΩ
			Q204	XT0037	Transistor, 2SC2412KR	1 1		FIK3050	Chip R., MCR03 10 kQ
101	E80005	SP, 038\$13D	Q205	XT0057	Transistor, 2581184F5Q T200	1.6		RK3050	Chip R., MCR03 10 kΩ
			Q206	XT0037	Transistor, 2SC2412KR			RK3048	Chip R., MCR03 4.7 kΩ
01	ED0002	Li Batt, 9R1225-1VF	Q207	XT0037	Transistor, 2SC2412KR	11		RK3042	Chip R., MCR03 2.2 kΩ
-			Q208	XE0004	F.E.T., 2SK209GR			RK3050	Chip R., MCR03 10 kΩ
19	CU3035	Chip C., CM105W5R102K50VAT	Q209	XT0038	Translator, 2SA1037KR	7 1	-	RK3050	Chip R., MCR03 10 kD
2	CU3017	Chip C., CM105CH330K50VAT	Q210	XT0037	Transistor, 2SC2412KR	I I B	223	RK3044	Chip R., MCR03 3.3 kΩ
13	CU3035	Chip C., CM105W5R102K50VAT	Q211	XT0038	Translator, 2SA1037KR	R	224		Chip R., MCR03 10 kg
14	CU3035	Chip C., CM105W5R102K50VAT	Q212	XT0037	Transistor, 2SC2412KR	R	225	and section of the last	Chip R., MCR10 2.2Ω
15	CU3036	Chip C., CM105W5R102K50VAT	Q213	XT0061	Transistor, 2SB1132Q T100	R	226		Chip R., MCR03 1 kΩ
16	CU3052	Chip C., CM105W5R103K25VAT	Q214	XT0058	Transistor, 2SD1760F5Q T200	R	227		Chip R., MCR03 4.7 kΩ
7	CU3035	Chip C., CM105W5R102K50VAT	11			R	226		Chip R., MCR10 2.20
18	C90051	Chip Tantal, TMC 1C105 TR	D201	XD0117	Zener, 05A25.8X	R	229		Chip R., MCR03 12 kG
9	CU3052	Chip C., CM105W5F103K25VAT	0202	XD0079	Zener, RLZ6.8A TE11,	R	230	PK3058	Chip R., MCR03 47 kG
0	CU3052	Chip C., CM105W5R103K25VAT							Chip R., MCR03 100 kD
1	CU3052	Chip C., CM105W5R103K25VAT	TH201	X80001	Thermistor, TD5-C225D	l Ri		Service III	Chip R., MCR03 10 kD
2	CU3052	Chip C., CM105W5R103K25VAT				R	233		Chip R., MCR03 33Ω
3	CU3052	Chip C., CM105W5R103K25VAT	CN201	UE0032	Connector, 10FM-1,0ST	1 1			Chip R., MCR03 39 kΩ
4	CS0053	Chip Tantal, TMC 0J476 TR	CN202	UE0032	Connector, 10FM-1.0ST			ATTENDED	Chip R., MCR03 1 MΩ
5	CU3035	Chip C., CM105WSR102K50VAT	CN203	UE0126	Connector, 10FM-1.0SG-1	R			Chip R., MCR03 100 kΩ
8	CU3035	Chip C., CM105W5R102K50VAT	CN204	UE0126	Connector, 10FM-1.0SG-1			and the state of the state of	Chip R., MCR03 100 kΩ
1	CU3035	Chip C., CM105WSR102K50VAT				R		and the second	Chip R., MCR03 10 kΩ
5	CU3035	Chip C., CM105W5R102K50VAT	C201	C80051	Chip Tantal, TMC 1C106 TR	1 1		***********	Chip R., MCR03 100 kG
3	CU3036	Chip C., CM105W5R102K50VAT	C202	CU3031	Chip C., CM105W5R471K50VAT	R			Chip R., MCR03 15 kΩ
			C203	CU3031	Chip C., CM105W5R471K50VAT				Chip R., MCR03 33 kΩ
	RK3080	Chip R., MCR03 10 kΩ	C204		Chip C., CM105W5R471K50VAT			and the second	Chip R., MCR03 82 kΩ
	RK3058	Chip R., MCR03 47 kΩ	C205	CU3031	Chip C., CM105W5R471K50VAT	R	1		Chip R., MCR03 52 kΩ
, (RK3101	Chip R., MCR03,160 kΩ	C206	CU3031	Chip C., CM105WSR471K50VAT	PI			Chip R., MCR03 47 Ω
1	RK3056	Chip R., MCR03 47 kD	C207	CU3031	Chip C., CM105W5R471K50VAT	R	247 F		Chip R., MCR10-0Ω
3	RK3058	Chip R., MCR03 47 kΩ	C208	CU8063	Chip C., C2012Y5V1E104ZT				
3	RK3058	Chip II., MCR03 47 kΩ	C209	CU3031	Chip C., CM105W5R471K50VAT				Main Unit
1	9K3058	CNp R., MCR03 47 kΩ	C210	CU3031	Chip C., CM105W5R471K50VAT	1		-	
1	RK3050	Chip R., MCR03 10 kQ	C211	CU3031	Chip C., CM105W5R471K50VAT	1C	301 X	CA0044	C, M57796MA
ı	RK3050	Chip R., MCR03 10 kΩ	C212	CU8003	Chip C., C2012Y5V1E104ZT	IC:	302 X	CA0064 1	C, MB1504
- 1		Chip R., MCR03 10 kΩ	C213		Chip Tantal, TMC 1C106 TR	IC:	303 X	(ADDES)	C, MC3357D
- 1		Chip R., MCR03 47 kΩ	C214		Chip C., CM105W5R103K25VAT				
- 1	RK3082	Chip R., MCR03 100 kΩ	C215		Chip Tantal, TMC 1C105 TR	1 03	101 JX	T0036	Translator, 2SC2413AP
	RK3066	Chip R., MCR03 220 kΩ	C216		Chip Tantal, TMC 0J476 TR	Q3	902 X	T0037 1	Fransistor, 2SC2412KR
- 1	RK3050	Chip R., MCR03 10 kD	C217	C90053	Chip Tantal, TMC 0J476 TR	Q3	103 X	70037	Franslator, 2SC2412KR
	RK3050	Chip R., MCR03 10 kΩ	C218	C08003	Chip C., C2012Y5V1E104ZT	Q3	104 X	T0050 1	Franslator, 2SC3082KQ T98
	RK3050	Chip R., MCR03 10 kΩ	C219	C\$0053	Chip Tental, TMC 0J476 TR	03	105 X	T0048 1	Fransistor, 2SC3357
- [RK3050	Chip R., MCR03 10 kΩ	C220	CS0053	Chip Tantal, TMC 0J476 TR	Q3	006 X	T0059	Francistor, 2SC3082KQ T96
- 1	RK3062	Chip R., MCR03 100 kΩ	C221	CU3052	Chip C., CM105W5R103K25VAT] Q3	107 X	10037	Fransistor, 2SC2412KR
1	RK3046	Chip R., MCR03 4.7 ΙαΩ	C222	CORMIS (Chip C., C2012Y5V1E104ZT	Q3	108 X	70038	Franslator, 2SA1037KR
	RK3074 (Chip R., MCR03 1 MQ	C223	CU8003	Chip C., C2012Y5V1E104ZT	03	109 X	TD037	Fransistor, 2SC2412KR
- 11	RK3058 (Chip R., MCR03 47 kΩ	C224	CU3054 (Chip C., CM105W5R223K25VAT	I Ca	10 X	T0036 T	Insusision, 2SC2413AP

Ref. No.	Part Code	Fari Hame and Number	Ref. No.	Part Code	Part Name and Number		Ref. No.	Part Code	Part Name and Number
Q311	хтоозв	Translator, 2SC2413AP	C340	C50023	Chip Tantel, TMC 0.1106 TR	Ш	R361	PIK3054	Chip R., MCR03 22 kΩ
			C341	CU3031	Chip C., CM105W5R471K50VAT	П	R362	RK3029	Chip R., MCR03 180Ω
D301	XD0078	Diode, DAN235K T98	C342	CU3028 CU3024	Chip C., CM105CH101K50VAT Chip C., CM105CH121K50VAT	H	R363 R364	RK3022 RK3022	Chip R., MCR03 47Ω Chip R., MCR03 47Ω
D303	XD0038	Diode, 19S133	C343 C344	CU8003	Chip C., C2012Y5V1E104ZT	П	naos	HADEL	Crip 11., INC/100 4752
D304 D306	XD0000 XD0000	Diode, RB400D T96 Diode, RB400D T96	C345	CU9003	Chip C., C2012Y5V1E104ZT	lŀ			RF Unit
D307	XD0000	Diode, R8400D T96	C346	CU8003	Chip C., C2012Y5V1E104ZT	H			
D308	XD0086	Diode, RB400D T96	C347	C80923	Chip Tantal, TMC 0J106 TR	H	Q401	XE0009	F.E.T., 2SK302GR
D309	XD0000	Diode, RB400D T98	C348	CU3020	Chip C., CM105CH580K50VAT	П	Q402	XE0008	F.E.T., 28K302GR
D310	XD0108	Diode, MA704TX	C349	CU3020	Chip C., CM105CH560K50VAT	П	Q403	XTOOS9	Transistor, 2SC3062KQ T96
			C350	CU3031	Chip C., CM105WSR471K50VAT	Н	D404	wheee	Diada DI C198
X301	X00033	X'tel, UM-1 12.6 MHz	C351	CU3013	Chip C., CM105CH150K50VAT Chip Tantal, TMC 1A475 TR	П	D401 D402	XD0006 XD0006	Diode, RLS135 Diode, RLS135
X302	XG0053	X2M, UM-1 22.055 MHz	C352 C353	C80089 CU3017	Chip C., CM105CH330K50VAT	H	D403	XD0086	Diode, RLS135
El 201	XC0004	Ceramic Filter, CFUM455E	C355	Coocii	Ceremic C., SA055C 222K	П	D404	XD0066	Diode, RLS135
FL301	ACOUNT	Caranic Pilar, Or Owner		CU8005	Chip C., C2012 81H 222K	П	D405	XD0012	Diode, 1SS97
CD301	XK0001	Ceramic Discri, CD8455G7	1			П	D406	X00073	Varicap, MA334B
						П	D407	XD0073	Vericap, MA3348
RV301	RH0031	Trimmer R., CVR-42A-103AW1D	R301	RK3043	Chip R., MCR03 2.7 kΩ	Н	D408	XD0012	Diode, 1SS97
HA305	RH0031	Trimmer R., CVR-42A-103AW1D	R302	RK3058	Chip R., MCR03 47 kD /	П	D409	XD0073	Varicap, MA334B
FIV303	RH0081	Trimmer R., CVR-42A-103AW1D	R303	RK3026	Chip R., MCR03 1000	Н	D410	XD0073	Vericep, MA334B
.		#1 ### fot	R304	RK3054	Chip R., MCR03 22 kΩ Chip R., MCR03 100 kΩ	H	D411 D412	XD0012 XD0012	Diode, 18897 Diode, 18897
CV301	CT0012	Trimmer C., GTZ-10A	R305 R308	RK3062 RK3058	Chip R., MCR03 100 kΩ	11	D413	XD0012	Diode, 18897
1 501	000000	Chip Inductor, MLF3216DR10M	P307	FIK3038	Chip R., MCR03 1 kΩ	$\ \ $	D414	XD0040	DAN, 202K (E only)
L301	GC0008	Chip Inductor, MLF3216DR10M	R308	RK3038	Chip R., MCR03 1 kD	$\ \ $			
L302	QK003\$	Coll, 77 1.5Ø	R309	RK3038	Chip R., MCR03 1 kΩ	П	1C401	XA0052	IC, S7116A
1303	diame	Con, FT Tions	P310	HK3042	Chip R., MCR03 2.2 kD	П			
B301	Q80003	Ferrite B., OP-2.52-1.2H	R311	RK3042	Chip R., MCR03 2.2 kG	П	CN401	f)10003	SP MIC Connector, HSJ1102-01-620
B302	Q80008	Ferrite B., OP-2.52-1.2H	R312	RK3022	Chip R., MCR03 4703	Н	CN402	UE0032	Connector, 10FM-1.0ST
			R313	PK3022	Chip R., MCR03 47D	П		UE8029	ANT Connector
S301	U90013	Bilde Switch, EBD1111213	R314	RK3036	Chip R., MCR03 1 kΩ	П			
			R315	RK3033	CNp R., MCR03 330Ω	П	SW401	UD0004	DIP, SW SSG M7P (T only)
CN361	UE9031	Connector, 10FM-1.08T	R318	RK0105 PK3027	Chip R., MCR10 2.2Ω Chip R., MCR03 120Ω	П	344401	00000	DIP, SW SSG MIT (TOM)
CN302	UE0031	Connector, 10FM-1.08T	P318	RK0011	Chip R., MCR10 47Q	П	FL401	XF0001	X Filter, 21.6 MHz
CN303 CN304	UE0030 UE0031	Connector, TZL-P05P-A1 Connector, 10FM-1.0BT	R318	PK3030	CNp R., MCR03 2200	П			,
014304	000001	Commond, for the first	R321	RK3090	Chip R., MCR03 10 kG	П	X401	X50001	Ceramic R., FAR-C40A-03580000-K01
	UP0104A	Mein P.G.B.	R322	PK3044	Chip R., MCR03 3.3 kΩ	П			
			R323	PK3082	CHp R., MCR03 100 kΩ	П	RV401	RH0038	Trimmer R., CVR-42A-473 AW1D
C301	CU3062	Chip C., CM105W5R103K25VAT	R324	PK3062	Chip R., MCR03 100 kΩ	П			
C308	CU3062	Chip C., CM105W5R103K25VAT	FI325	PK3036	Chip R., MCR03 1 kΩ	П	L401	GK0032	Coll, 41 20
C303	CU3081	Chip C., CM105W5R471K50VAT	R326	RK3082	Chip R., MCR03 100 kΩ	П	L402	GK0033	Coll, 77 1.5Ø
C304	CU3081	Chip C., CM106W5R471K50VAT	R327	RK3038	Chip R., MCR03 1 kG	П	L403	QK0034 QK0033	Coll, 11T 1.5Ø Coll, 7T 1.5Ø
C305	CU2017	Chip C., CM105CH330K50VAT	P328	PK3038	Chip R., MCR03 1 kΩ	П	L405	QA0013	Coll
C306	CUSCOS	Chip C., C2012Y5V1E104ZT Chip C., CM105W5R471K50VAT	R329 R330	RK3090	Chip R., MCR03 10 kΩ	П	L406	QA0013	Coll
C307 C309	CU3031	Chip C., CM105W5R471K50VAT	R331	RK3098	Chip R., MCR03 10 kQ	П	L407	QC0010	Chip Inductor, MLF3218E100M
C310	CU3019	Chip C., CM105CH470K50VAT				Н	L408	QA0013	Coll
C311	C80049	Chip Tantal, TMC 1C105 TR	R333	RK3080	Chip R., MCR03 10 kΩ	П	L409	QA0013	Coll
C312	CU3031	Chip C., CM105W5R471K50VAT	R334	RK3050	Chip R., MCR03 10 kΩ		L410	GC0008	Chip Inductor, MLF3218DR10M
C313	CU3091	Chip C., CM105W5R471K50VAT	R335	RK3038	Chip R., MCR03 1 kΩ	П	L411	QC9016	Chip Inductor, MLF3216E100M
C314	CS0049	Chip Tanial, TMC 1C105 TR	R336	PK3050	Chip R., MCR03 10 kΩ	П		Bucces	DEL D 440000 1110
C315	CU3013	Chip C., CM105CH150K50VAT	R337	PK3058	Chip R., MCR03 47 kΩ	П	R401	RK3074	Chip R., MCR03 1 MΩ
C316	CU3010	Chip C., CM105CH090C50VAT	R336	PK3068	Chip R., MCR03 47 kΩ	Н	F1402 F1403	RK3074 RK3018	Chip R., MCR03 1 MΩ Chip R., MCR03 22Ω
C317	CU3017	Chip C., CM105CH330K50VAT	R339 R340	PRC9080 PRK3062	Chip R., MCR03 10 kΩ Chip R., MCR03 100 kΩ		F1403	RK3018	Chip R., MCR03 22Ω
C316 C319	CU3029 CU3031	Chip C., CM105CH101K50VAT Chip C., CM105W5R471K50VAT	R341	PK3080	Chip R., MCR03 10 kΩ	Į l	R405	RK3074	Chip R., MCR03 1 MΩ
C320	CUSCOS	Chip C., C2012Y5V1E104ZT	R342	PK3074	Chip R., MCR03 1 MO		F1406	RK3074	Chip R., MCR03 1 MO
C321	CU3014	CNp C., CM105CH180K50VAT	R343	PK3090	Chip R., MCR03 10 kΩ		F1408	PK3034	Chip R., MCR03 470Ω
C322	CU3018	CHIp C., CM105CH390K50VAT	R344	PK3038	Chip R., MCR03 1 kΩ		F1409	RK3022	Chip R., MCR03 470
C323	CU3023	Chip C., CM105CH101K50VAT	R345	MK3046	Chip R., MCR03 4.7 kΩ		R410	RK3080	Chip R., MCR03 10 kΩ
C324	CU3023	CMp C., CM105CH101K50VAT	R348	PIK3006	CNp R., MCR03 220 kΩ		R411	RK3034	Chip R., MCR03 470Ω
C328	CU3031	Chip C., CM105W5R471K50VAT	9347	RK3034	Chip R., MCR03 4700		R412	RK3038	Chip R., MCR03 1 kΩ
C327	C80049	Chip Tentel, TMC 1C105 TFI	R346	RK3046	Chip R., MCR03 4.7 kΩ Chip R., MCR03 1 kΩ		R413	RK3062 RK5046	Chip R., MCR03 100 kΩ Chip R., MCR03 4.7 kΩ
C326	CU3082	Chip C., CM105W5R103K25VAT	R349 R350	RK3038 RK3058	Chip R., MCR03 47 kΩ		R415	PK3048	Chip R., MCR03 4.7 kΩ
C329	CU9009	Chip C., C32f6 1H0.01UB	P351	RK3040	Chip R., MCR03 1.5 kΩ	1	F1416	PIK3001	Chip R., MCR03 0Ω (E only)
C330	CU3011	Chip C., CM105CH100K50VAT Chip C., CM105W5R102K50VAT	R352	RK3040	Chip R., MCR03 1.5 kΩ	1			
C331 C332	CU3035 CU3035	CNp C., CM105W5R102K50VAT	R353	9K3058	Chip R., MCR03 47 kO		19419	RK3064	Chip R., MCR03 150 kΩ (E only)
C333	C83035	CNp C., CM105W5R102K50VAT	R354	7K3040	Chip R., MCR03 1.5 kΩ		FI419	RK3001	Chip R., MCR03 0Ω (Tonly)
C334	CU3035	Chip C., CM105W5R102K50VAT	R355	FIX3026	Chip R., MCR03 100Ω	1	R420	RK9058	Chip R., MCR03 47 kΩ
C335	CU6063	CNp C., C2012Y5V1E104ZT	R356	FEX.3048	Chip R., MCR03 220 kΩ	1	R421	RK3001	Chip R., MCR03 0Ω (E only)
C338	CU3052	CHIP C., CM105W5R103K25VAT	R357	RK3042	CNp R., MCR03 2.2 kΩ	1	FI421	RK3070	Chip R., MCR03 470 kΩ (Tonly)
C337	CU9003	Chip C., C2012Y5V1E104ZT	R358	RK3086	Chip R., MCR03 220 kΩ		F1422	RK3034	Chip R., MCR03 470Ω (E only)
C338	CU3082	Chip C., CM105W5R103K25VAT	R359	RK3042	Chip R., MCR03 2.2 kΩ		R426	PD0116	Jumper, JPW01 FC03 (E only)
	CU3052	Chip C., CM105W5R103K25VAT	R360	RK3028	Chip R., MCR03 100Ω		R427	RD0115	Jumper, JPW01 FC03 (E only)

Flef. No.	Part Code	Part Name and Number	Ref. No.	Part Code	Part Name and Number	Flot. No.	Part Code	Part Name and Number
R428	RD0115	Jumper, JPW01 FC03 (E only)	R509	RK3062	Chip R., MCR03 100 kΩ			-
R429	RD0115	Jumper, JPW01 FC03 (E only)	R510	RK3062	Chip R., MCR03 100 kΩ		1 1	
R430	RD0115	Jumper, JPW01 FC03 (E only)	PI511	RK3050	Chip R., MCR03 10 kD		1 1	
			R512	RK3050	Chip R., MCR03 10 kΩ	11		
C401	CC0117	Ceremic C., CC45CH1H18 pF	R513	PIK3050	Chip R., MCR03 10 kΩ	Ш	1 1	·
C402	CU3015	Chip C., CM105CH220K50VAT	R514	MK3054	Chip R., MCR03 22 kΩ	П	1 1	
C403	CU3010	Chip C., CM105CH090C50VAT	R515	RK3032	Chip R., MCR03 330Ω	П	1 1	
C404	CU3017	Chip C., CM105CH330K50VAT	R516	RK3084	Chip Fl., MCR03 22 kΩ	П	1 1	
C405	CU3013	Chip C., CM105CH150K50VAT		DTME	Init (D L120T anh)	11	1	
C408	CU3015	Chip C., CM105CH220K50VAT		DIME	Unit (DJ-120T only)	П]	
C407	CU3017	Chip C., CM105CH330K50VAT	ICent	V40049	10 1 540870	11	1 1	
C408	CU3013	Chip C., CM105CH150K50VAT	IC601	XA0042	IC, LF140872	!		
C409	CU3015	Chip C., CM105CH220K50VAT	Q601	X70036	Translator, 2SA 1037KR	П	1 1	
C410 C411	CU3031	Chip C., CM105W5R471K50VAT Chip C., CM105W5R471K50VAT	G905	XT0037	Translator, 2SC 2412	11		
C412	CU3002	CNp C., CM105CH010C50VAT	Q603	3070041	Transistor, FMW1		1 1	
C413	CU3019	Chip C., CM105CH470K50VAT	1 0000	X10041	Transaction, Printer	H		
C414	CU3015	Chip C., CM105CH220K50VAT	X801	XB0001	Caramic Resonator, FAR-C4CA-	П	1 1	
C415	CU3019	Chip C., CM105CH470K50VAT	1		03580000-K01	11	1 1	
C416	CU3003	CHp C., CM105CH020C50VAT	11		*	П	1 1	
C417	CU3052	Chip C., CM105W5R103K25VAT	RV601	RH0088	Trimmer PL, MVR32 HXBN 473	11	1	
C418	CU3031	Chip E., CM105W5R471K50VAT				П		
C419	CU3002	CHIP C., CM105CH010C50VAT	R601	PHC3058	Chip R., MCR03 47 kΩ	П.		
C420	CU3052	Chip C., CM105W5R103K25VAT	R802	FIK3022	Chip R., MCR03-47Ω	П	1 1	
C421	CU3006	Chip C., CM105CH050C50VAT	R603	RK3050	Chip R., MCR03 10 kΩ	П	1 1	
C422	CU3031	Chip C., CM105W5R471K50VAT	PI804	RK3046	Chip R., MCR03 4.7 kΩ	П	1 -1	
C423	CU3031	Chip C., CM105W5R471K50VAT	PI605	PK3050	Chip R., MCR03 10 kΩ	11	1 1	
C428	C30050	Chip Tantal, TMC1A475 TR	Pe06	PIK3050	CHip FL, MCR03 10 kΩ	11		
C427	CU6003	Chip C., CC2012 YIE 0.1 µF	R607	RK3030	Chip R., MCR03 1.2 kΩ	11	1 1	
C428	CU3082	Chip C., CM105W5R103K25VAT	R608	RK3046	Chip R., MCR03 4.7 kΩ	11	1 1	
		(Eonly)	A809	RK3088	Chip R., MCR03 47 kg	11	1 1	
C428	CU3039	(Tonly)	R610	PK3076	Chip Fl., MCR03 1.5 MQ			
			C801	C80087	Chip Tental, TMC 0J225 TR	11	1	
		VCO Unit	C902	CU3039	Chip C., CM105W5R222K50VAT	i I	1 1	
			C804	CU3031	Chip C., CM105W5R471K50VAT			
Q501	XT0059	Transistor, 28C3082KQ T96	C806	CU3035	Chip C., CM105W5R102K50VAT			
Q602	XT0037	Transistor, 2SC2412KR	C608	CU3035	CNp C., CM105W5R102K50VAT		1 1	
Q503	XT0037	Translator, 2SC2412KR	C607	CU3035	Chip C., CM105WSR102K50VAT		1 1	
Q504 Q505	XT0058	Translator, 29C3062KQ T96 Translator, 29C3062KQ T96	C831	CU3035	Chip C., CM106W5R102K50VAT			
D501	XD0077	Vericep, 15V181TPH2		Med	chanical Parts			
D502	X00077	Varicap, 1SV161TPH2	11	FG0021	Jack Rubber, Jack Cover		1 1	
			11	DK0076B	Acryl Plate .	11	1	V
L501	QC0010	Chip Inductor, MLF3216E100M	11	DK0104	VOL plate			
L502		Colt	11	DKOOOG	Ornament of HI/LOW	!	1 1	
L503	QC0010	Chip Inductor, MLF3216E100M	11	DK0082	Ornament of DIP SW (T only)			
			11	DK0081	Omament of DIP SW (E only)		1 1	
	UP0108A	VCO P.C.B.	11	KM0063	Front Case (Tonly)		1 1	
			11	KM0004 KB0027	Front Case (E only) Rear Case			
C501	CU3031	Chip C., CM105W5R471K50VAT		KU0085			1	
C502	C80023	Tantal C., TSD-S 10 µ/6.3 V	.11		Upper Panel			
C503	CU3031	Chip C., CM105W5R471K50VAT		FG0095	Insulator DUP Fixture			
C504	C80049	Chip Tantal, TMC 1C105 TR	П	SH0048	DUP Knob		1 1	
C505	CU3023	Chip C., CM105CH101K50VAT		NB0017 HL0003	HI/LOW Knob		1 1	
C506 C507	CU3002 CU3031	Chip C., CM105CH010C50VAT		NL0004	F. Lock Knob		1	i
	1	Chip C., CM105W5R471K50VAT			SQL OFF Knob			
C508 C509	CU3023 CU3031	Chip C., CM105CH101K50VAT Chip C., CM105W5R471K56VAT	11	MEGDIS	Tone Knob			
C510		Chip C., CM105W5R471K50VAT		NB0018	PTT Knob		1 1	i
C511		Chip C., CM105CH020C50VAT	11	NE0018	Refease Knob		1 1	
C512	Decorporate and the	Chip C., CM105CH100K50VAT	11	NK0017	Volume Knob]]	
C513		Chip C., CM105W5R471K50VAT		F00032	DTMF Silioon Rubber (Tonly)			
		Chip C., CM105W5R471K50VAT			1			
	amed that abstracts	CHID C., CHI DOTTORAT INDUTAL	11	1 1			1 1	
C514 C515	CU3031		11			_		-
C514	CU3031 CU3017	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 µ/25 V				1		
C514 C515	CU3031 CU3017 CS0009	CHIp C., CM105CH330K50VAT						
C514 C515 C518	CU3031 CU3017 CS0009 CU3018	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 µ/25 V						
C514 C515 C516 C517	CU3031 CU3017 CS0009 CU3018 RK3022	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 µ/25 V Chip C., CM105CH390K25VAT						
C514 C515 C516 C517 R501	CU3031 CU3017 CS0009 CU3018 RK3022 RK3028	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 µ/25 V Chip C., CM105CH390K25VAT Chip R., MCR03 47Ω						
C514 C515 C516 C517 R501 R502	CU3031 CU3017 CS0009 CU3018 RK3022 RK3028 RK3050	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 μ/25 V Chip C., CM105CH390K25VAT Chip R., MCR03 47Ω Chip R., MCR03 100Ω						
C514 C515 C516 C517 R501 R502 R503 R504	CU3031 CU3017 CS0009 CU3018 RK3022 RK3026 RK3050 RK3050	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 μ/25 V Chip C., CM105CH390K25VAT Chip R., MCR03 47Ω Chip R., MCR03 100Ω Chip R., MCR03 10 kΩ						
C514 C515 C516 C517 R501 R502 R503 R504 R505	CU3031 CU3017 CS0009 CU3018 RK3022 RK3028 RK3050 RK3050 RK3050	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 μ/25 V Chip C., CM105CH390K25VAT Chip R., MCR03 47Ω Chip R., MCR03 100Ω Chip R., MCR03 10 kΩ Chip R., MCR03 10 kΩ						
C514 C515 C516 C517 R501 R502 R503 R504 R505 R506	CU3031 CU3017 CS0009 CU3018 RK3022 RK3028 RK3050 RK3050 RK3050	Chip C., CM105CH330K50VAT Tantal C., TSD-S 1 μ/25 V Chip C., CM105CH390K25VAT Chip R., MCR03 47Ω Chip R., MCR03 100Ω Chip R., MCR03 10 kΩ Chip R., MCR03 10 kΩ Chip R., MCR03 1 kΩ						

■ DISASSEMBLY INSTRUCTIONS



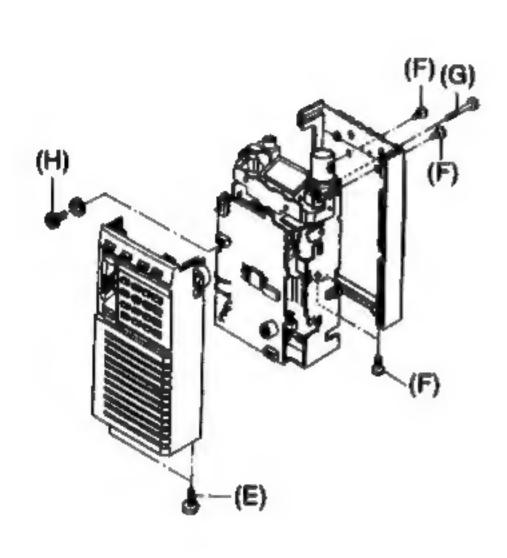


Fig. 3

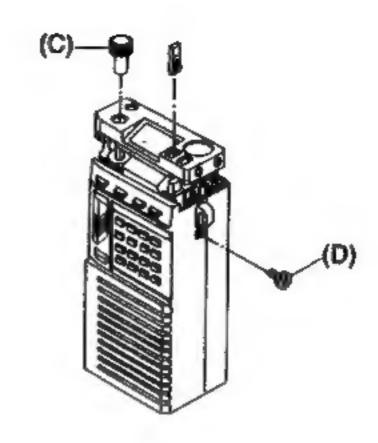


Fig. 2

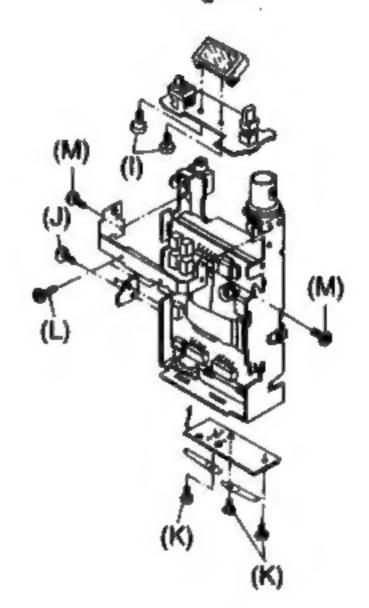
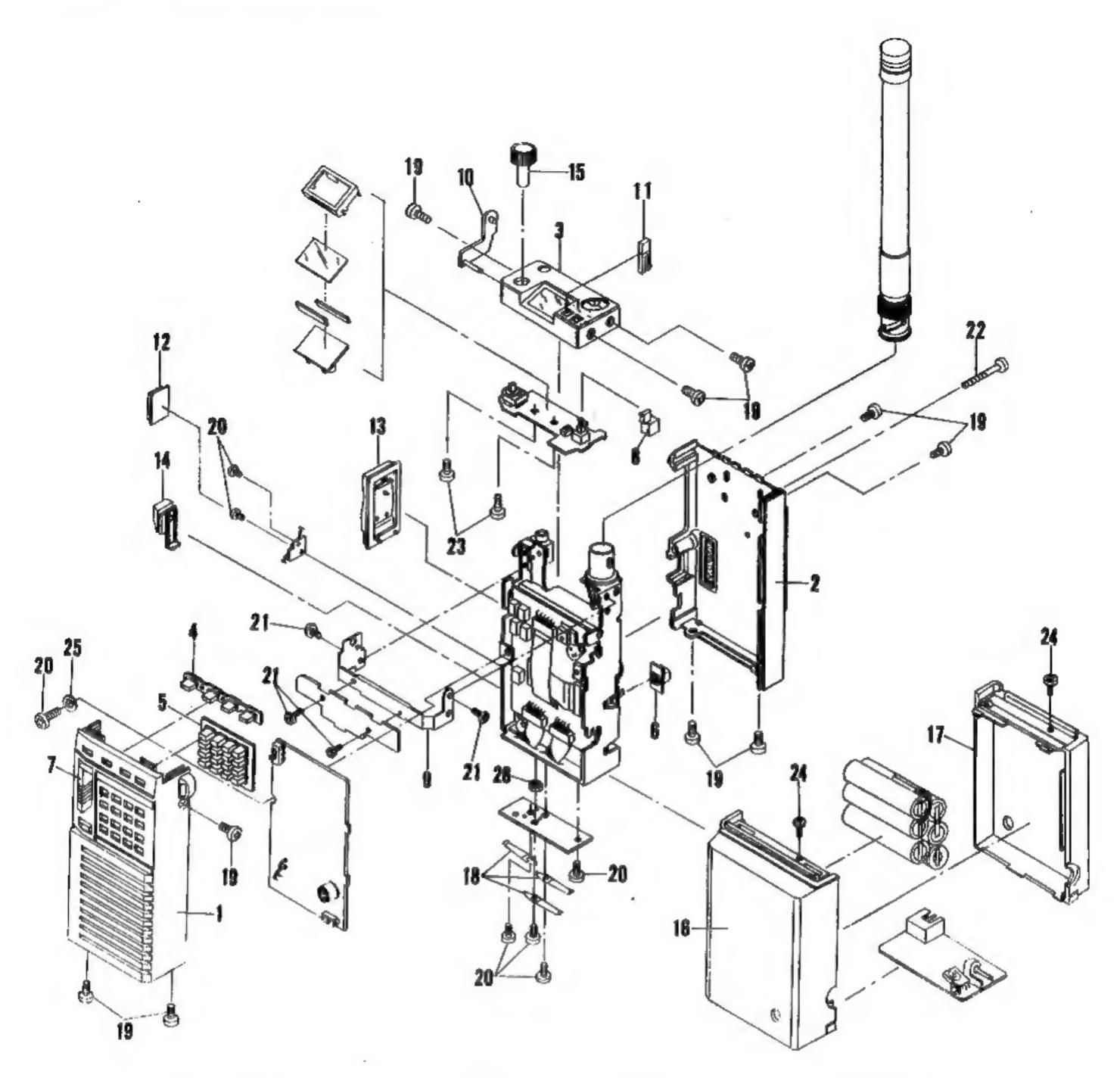


Fig. 4

Shown in Fig.—.	To remove—.	Remove—.
1	Upper Panel	Screw (A)×3
1	Upper Panel	Rubber Flex Antenna(B)×1
2	Upper Panel	Volume Knob
2	Front Panel	Screw
3	Front Panel	Screw (E)×2
3	Rear Panel	Screw (F)×3
3	Rear Panel	Screw (G)×1
3 ,	CPU Board	Screw (and Washer)
4	LCD	Screw (I)×2
4	Lamp (Tone) Board	Screw (J)×2
4	Power Supply Terminal Board	Screw (K)×3
4	Sub SW Board	Screw (L)×2
4	Fixing Plate	Screw(M)×2

■ CABINET PARTS LOCATION



Mechanical Parts KM0063 Front Case DJ-120T only								
KM0063 Front Case DJ-120T only	Mechanical Parts							
KM0084 Front Case DJ-120E only								
KB0027 Rear Case								
KU0065 Upper Panel								
FG0054 Key Pad .								
FQ0032 Silicon Key (DJ-120T only)								
NL0003 HI/LOW Knob								
NL0004 FLOCK Knob								
NP0012 SQL OFF Knob								
SH0046 Fixing Plate								
FG0021 EP Rubber								
NB0033 CALL Knob								
NB0016 LIGHT (TONE) Knob								
NB0018 PTT Knob								
NB0018 RELEASE Knob								
NK0017 VOLUME Knob								
KF0012 Ni-Cd Battery Casa Cover								
KD0018 Ni-Cd Battery Case								
9P0001 Circuit Contact								

Ref. No.	Part Code	Part Name and Number
		Screws
19	AF0007	M2×2.5
20	AF0003	M2×3
21	AF0006	M1.4×2
22	AP0003	M2×5
23	AP0004	M2×5
24	AF0008	M2×3.5
		Washer
25	AZ0015	W2
		Nut
28	AN0004	M2

ADJUSTMENT

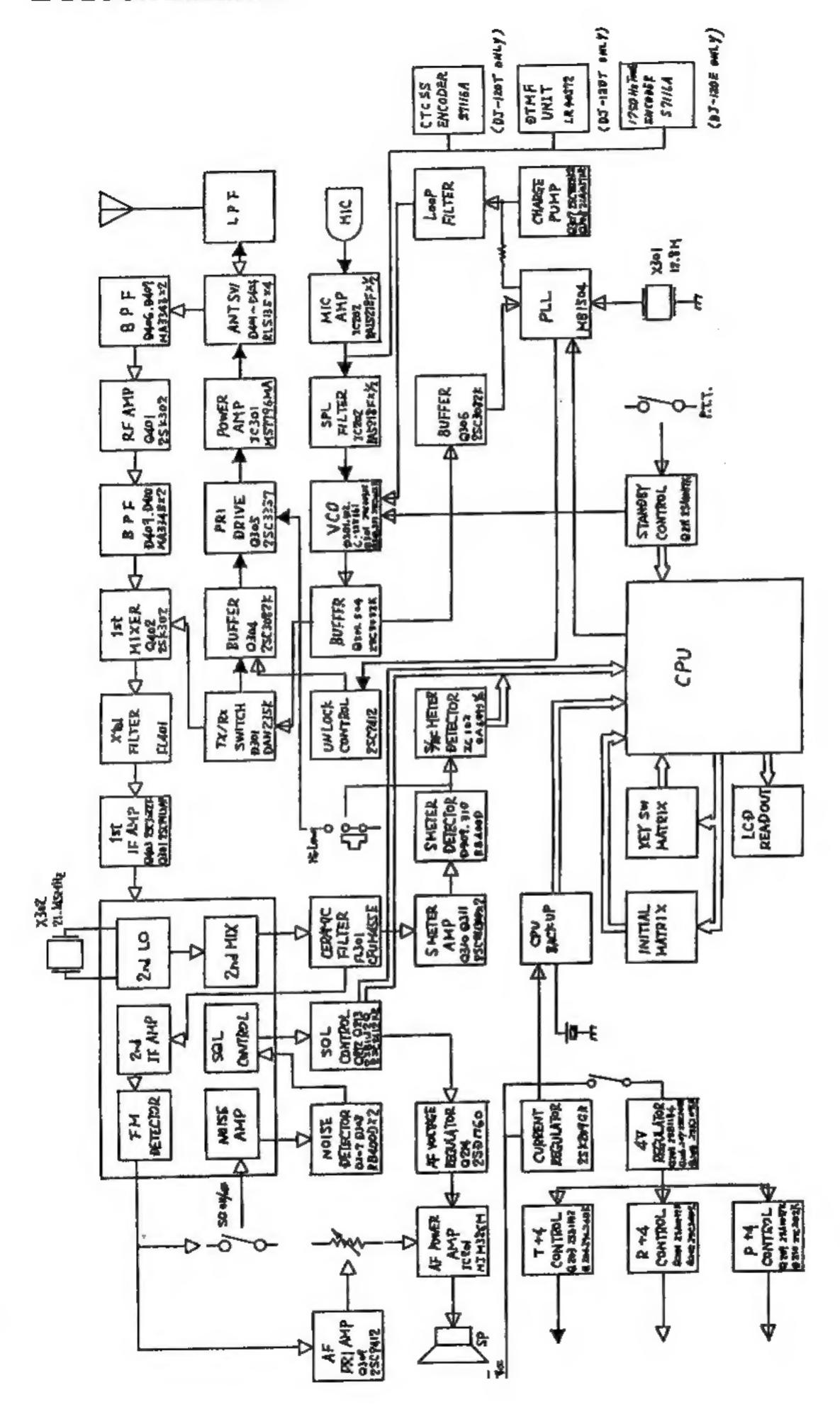
1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
Frequency adjustment	CV301 (Main PCB)	Set the unit in the transmission mode at 144.03 MHz and adjust CV301. (Transceiver tester, counter)	144.03 MHz ±50 Hz
Modulation degree adjustment	VR303 (Main PCB)	Input a signal of 1 kHz/50 mV into the SP/MIC jack and adjust VR303 so that you obtain 4.7 kHz/Dev in the transmission mode.	4.7 kHz ±0.2 kHz
3. Subaudible tone	VR401 (RF Unit)	Set the subaudible tone to 114.8 Hz by DIP Switch and adjust VR401 so that you obtain 800 Hz/Dev.	800 Hz ±50 Hz
4. DTMF	VR601 (DTMF Unit)	Push 1 in the transmission mode and adjust VR601 so that you obtain 3 kHz/Dev.	3 kHz ±500 Hz

2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
VCO P/D voltage adjustment	L502 (VCO)	Adjust L502 so that P/D voltage is 0.5 V at 144.03 MHz. (DC voltmeter)	0.5 V±0.1 V
2. RF Amp	L405, 406, 408 & 409 (RF PCB)	1 kHz, 3.5 kHz/Dev, -6 dbμ (Meter direct-reading), 145.03 MHz, audio output 50 mW/8Ω (Transceiver tester) Adjust L405, 406, 408 & 409 so that SINAD sensitivity becomes maximum.	−6 dbµ Мах.
3. Squelch Sensitivity	VR301 (Main PCB)	1 kHz, 3.5 kHz/Dev, -8 dbµ (Meter direct-reading), 145.03 MHz (Transceiver tester) Turn VR301 counterclockwise from closed conditions and set to a point where the squeich is open.	8 dbµ ±1
4. S-meter adjustment	VR302 (Main PCB)	1 kHz, 3.5 kHz/Dev, +17 dbµ (Meter direct- reading) Turn VR302 so that FULL bar begins to light.	

■ BLOCK DIAGRAM



- 9 -

- COMMON

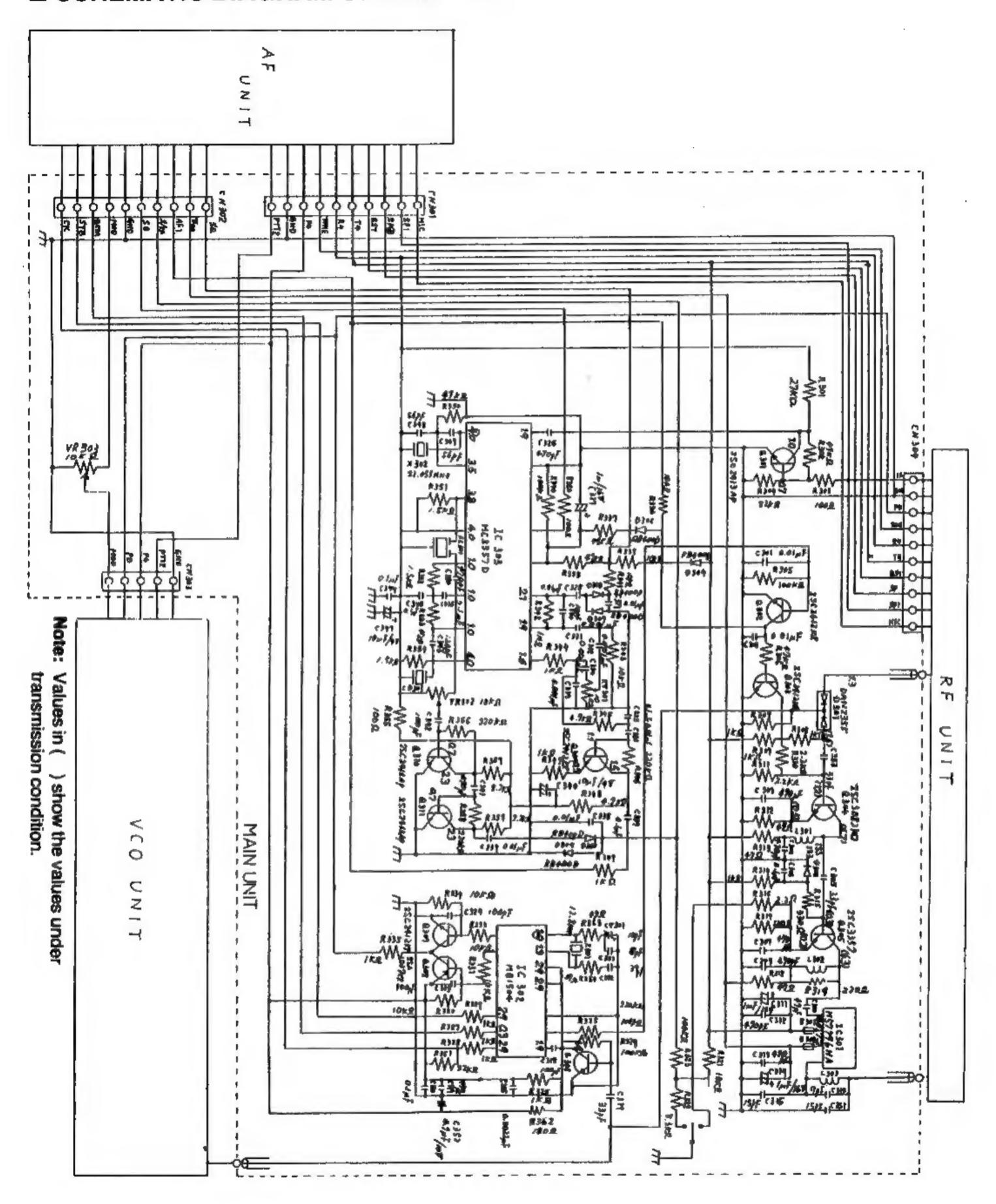
Ψ

- RX LINE

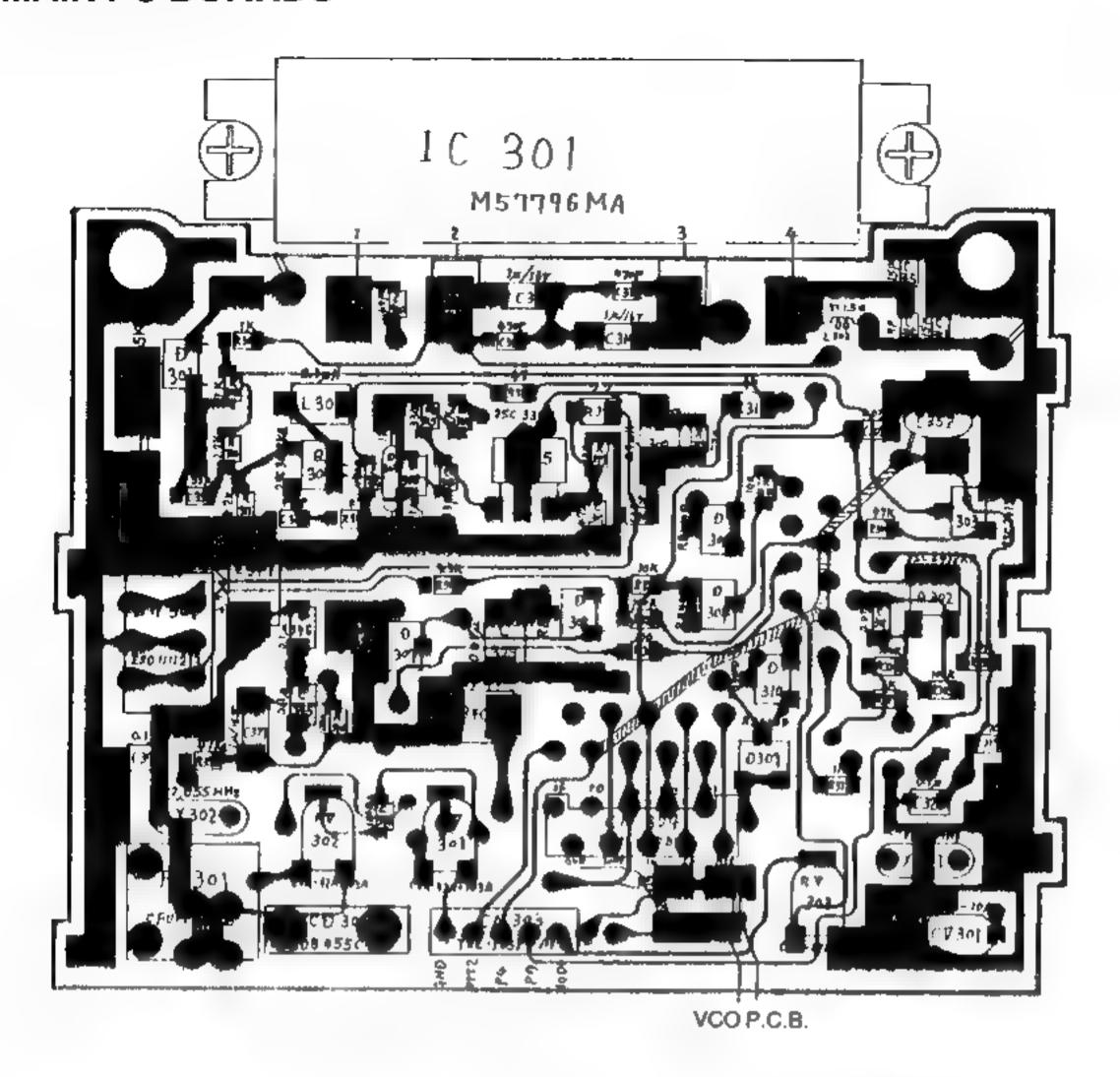
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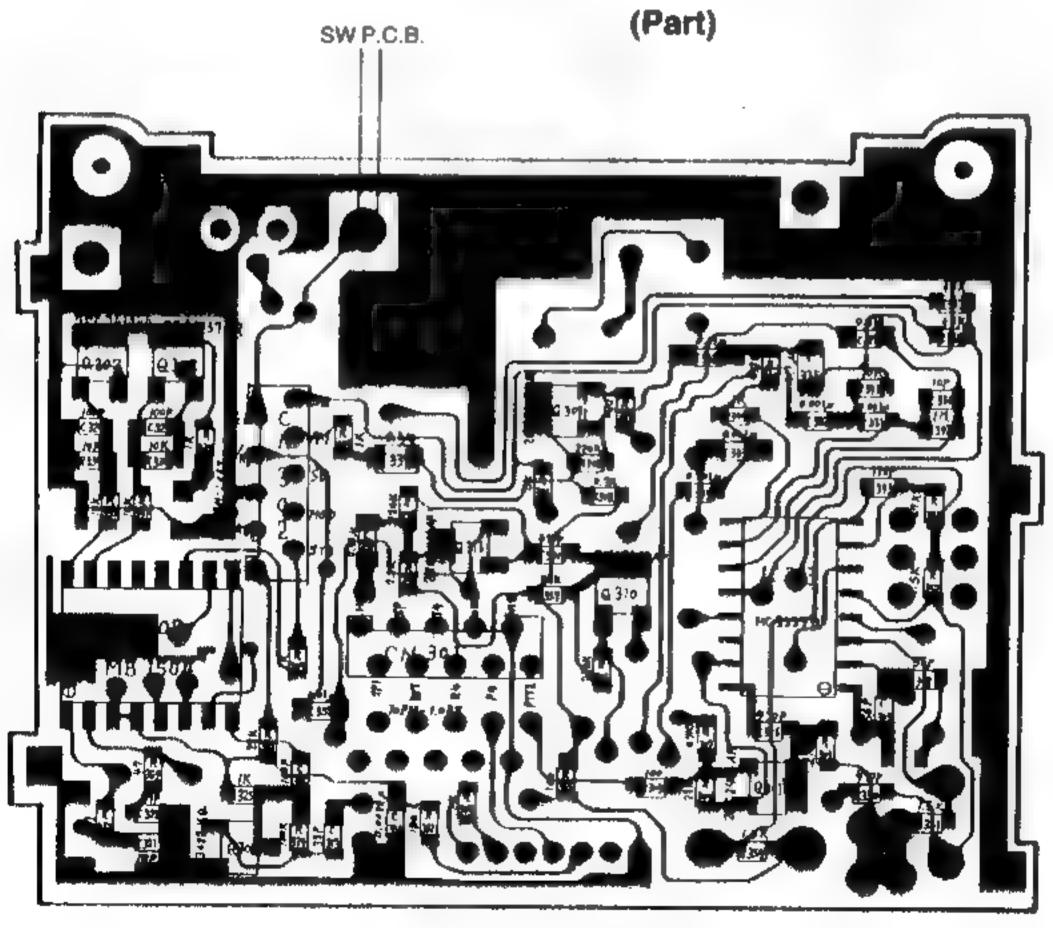
TX LINE

SCHEMATIC DIAGRAM OF MAIN UNIT



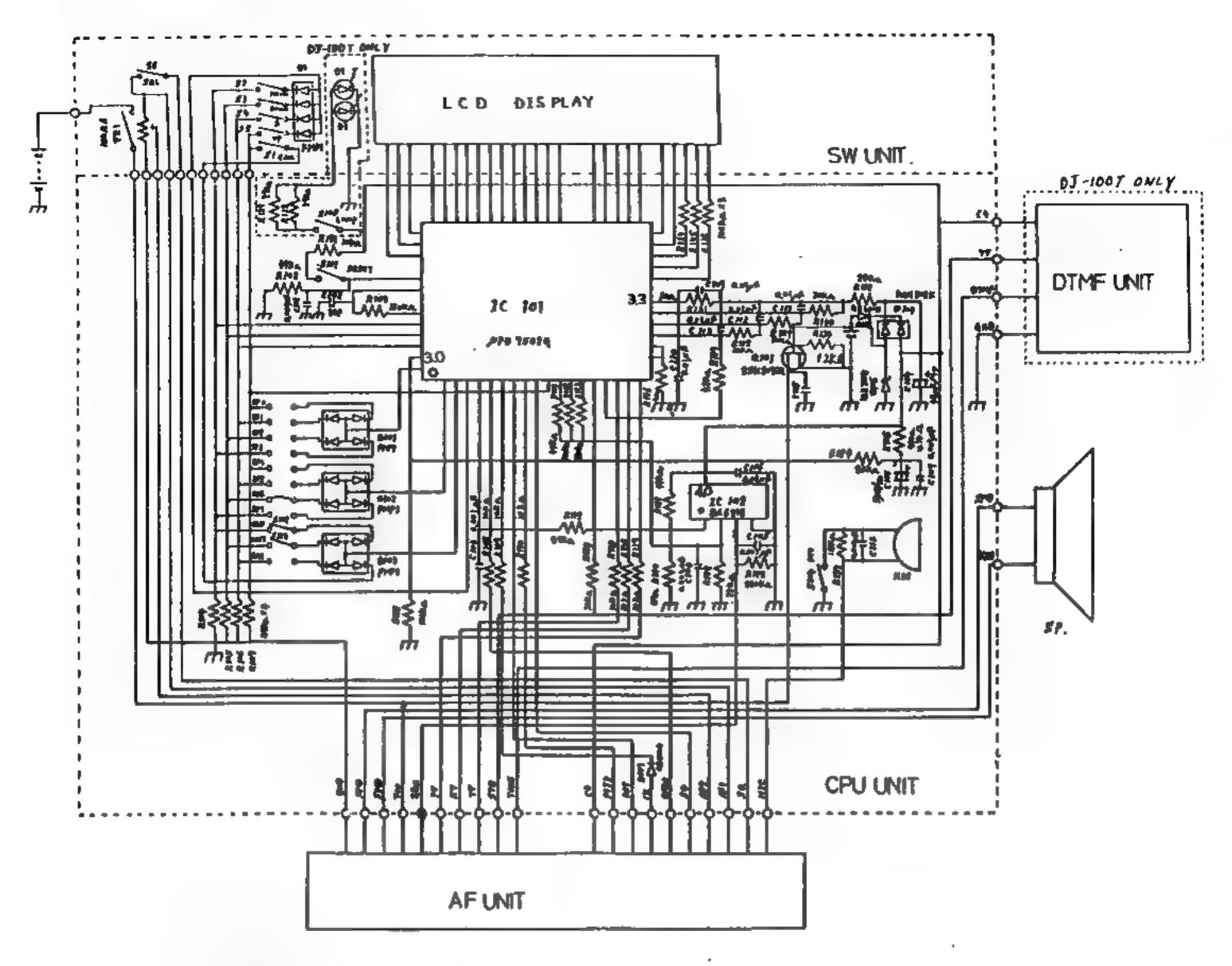
■ MAIN PC BOARDS



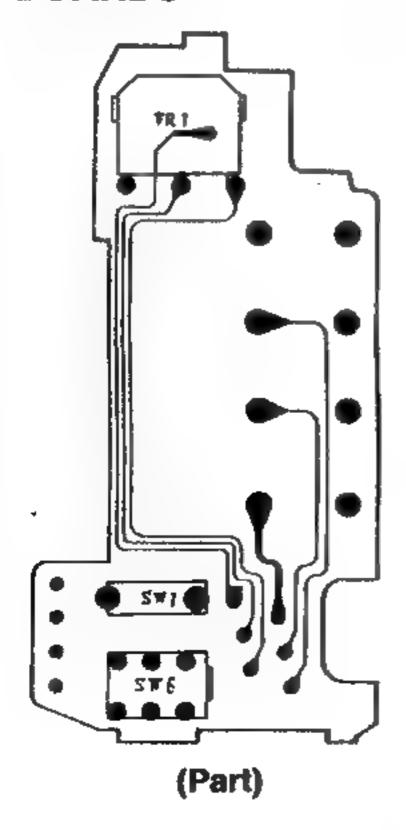


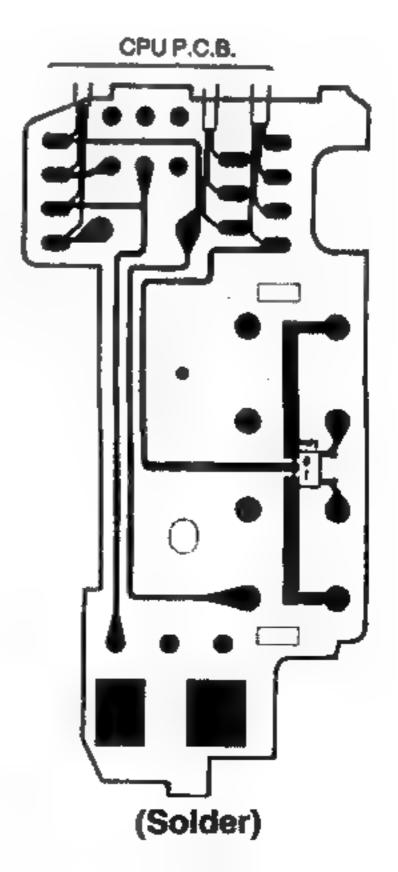
(Solder)

■ SCHEMATIC DIAGRAM OF CPU UNIT

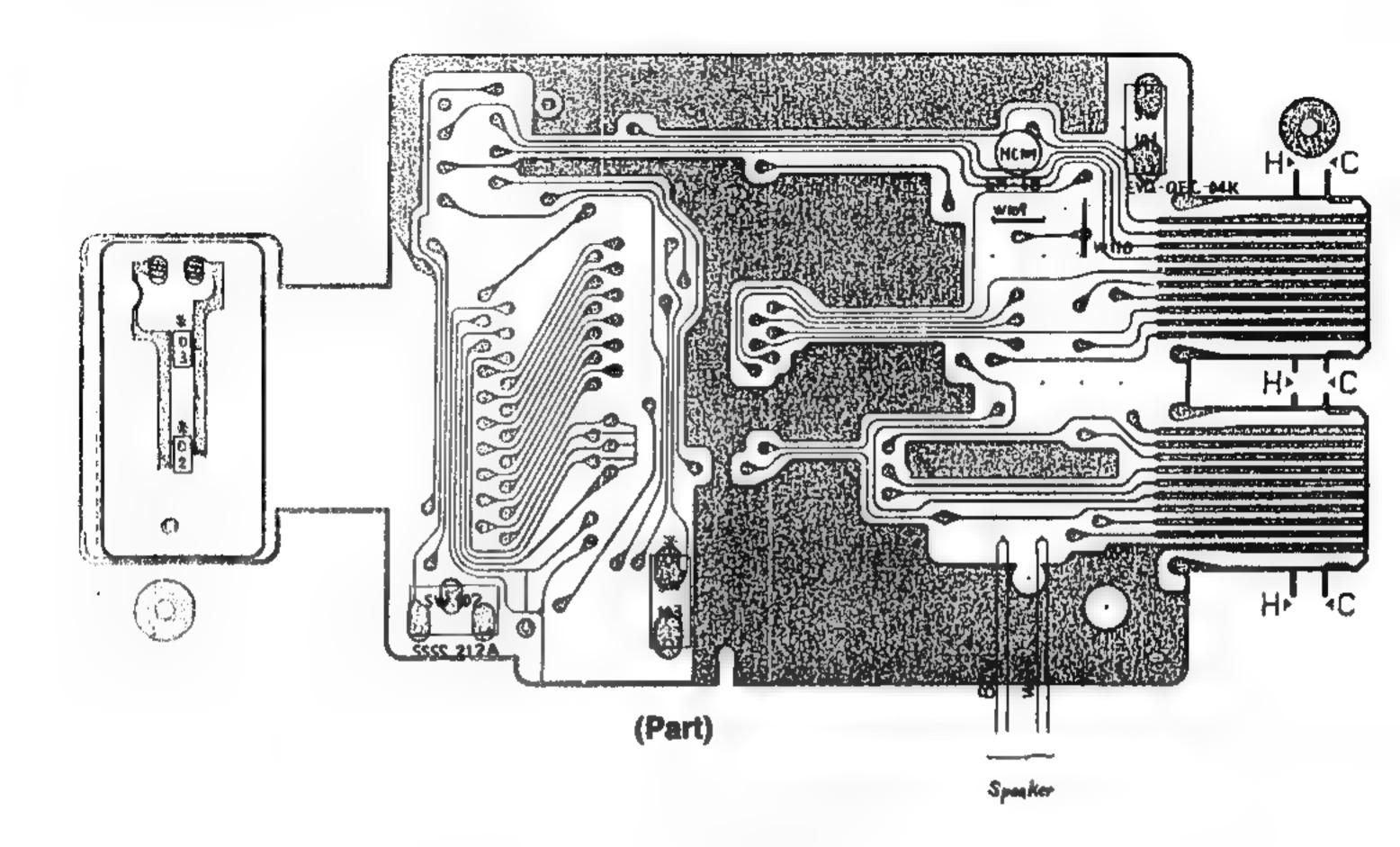


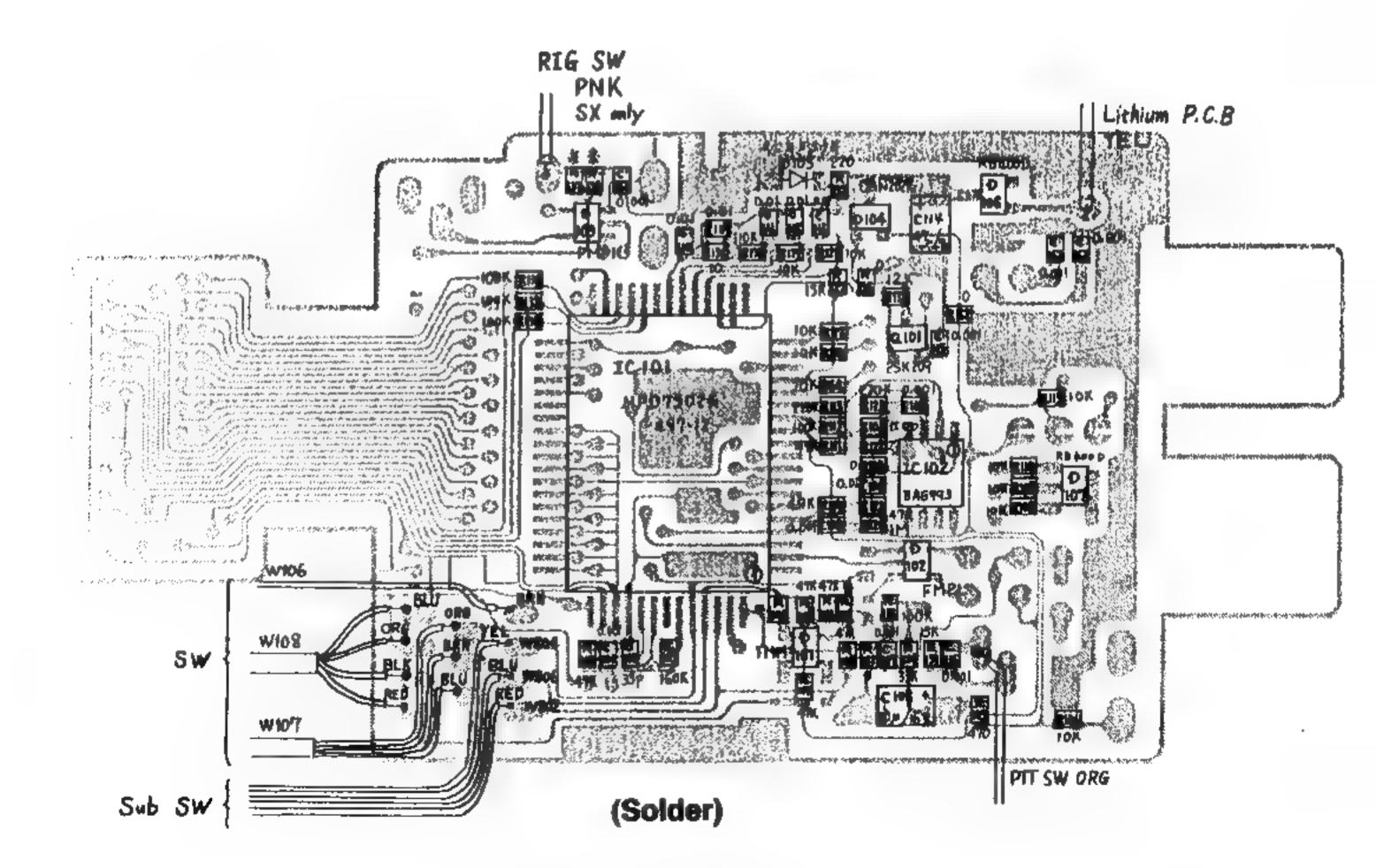
SW PC BOARDS



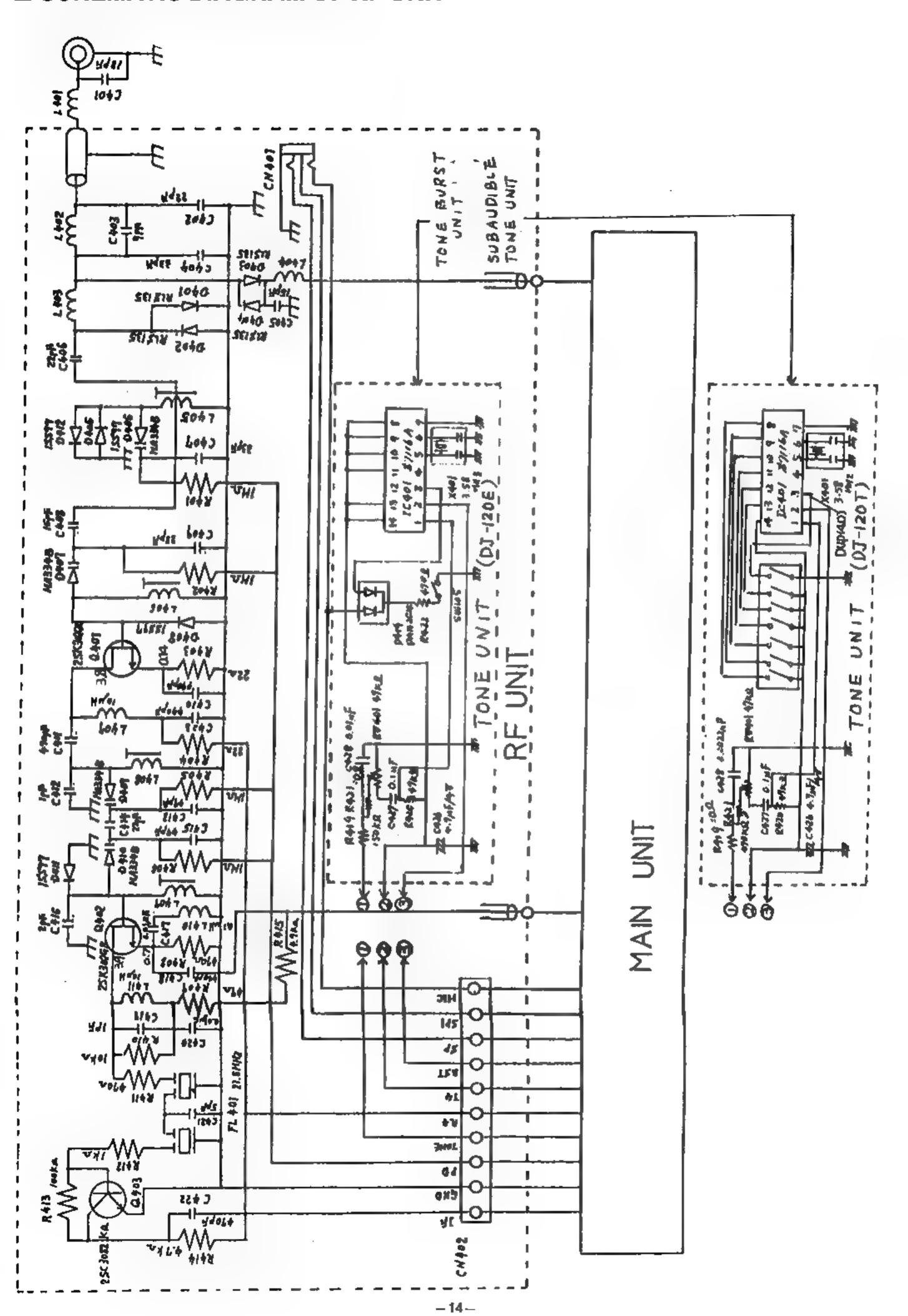


E CPÚ PC BOARDS

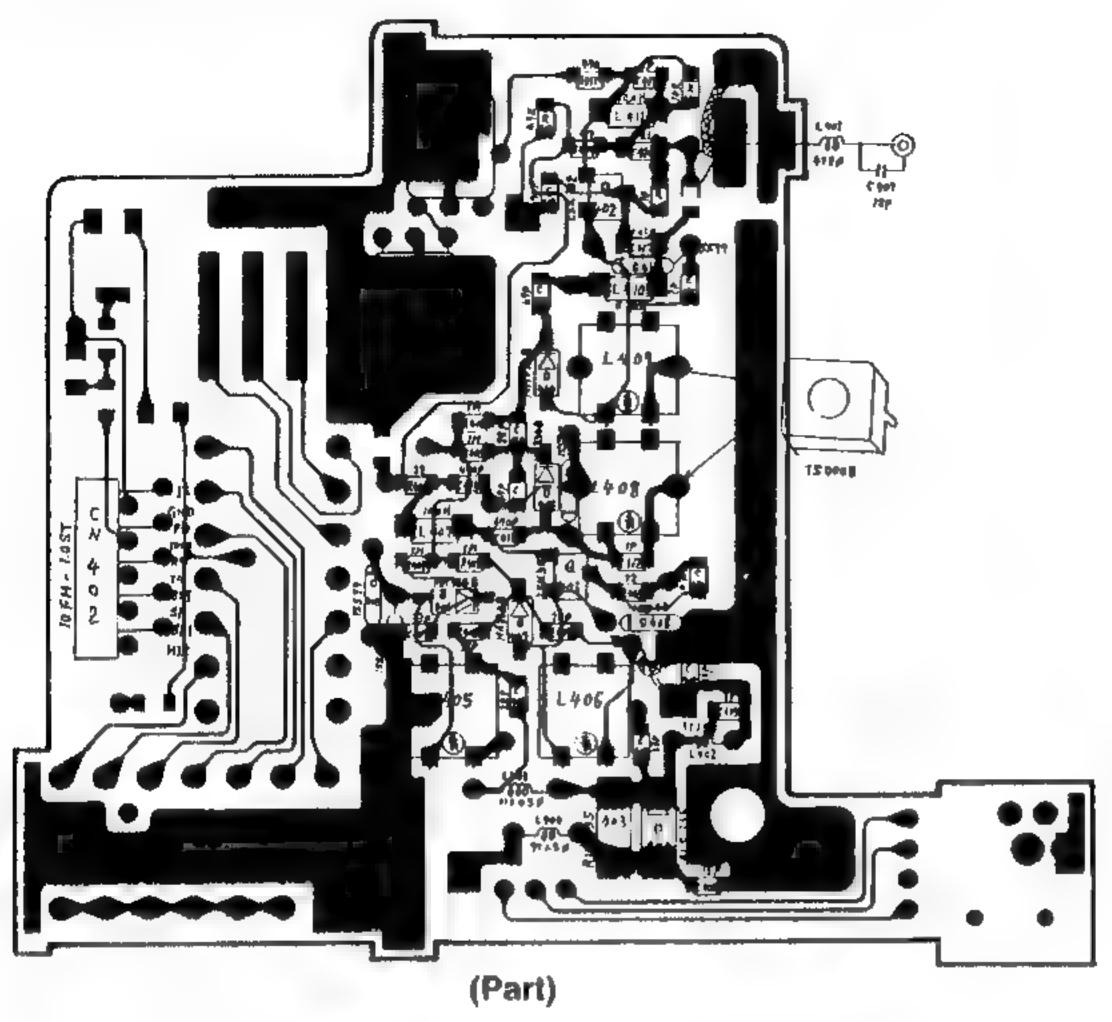


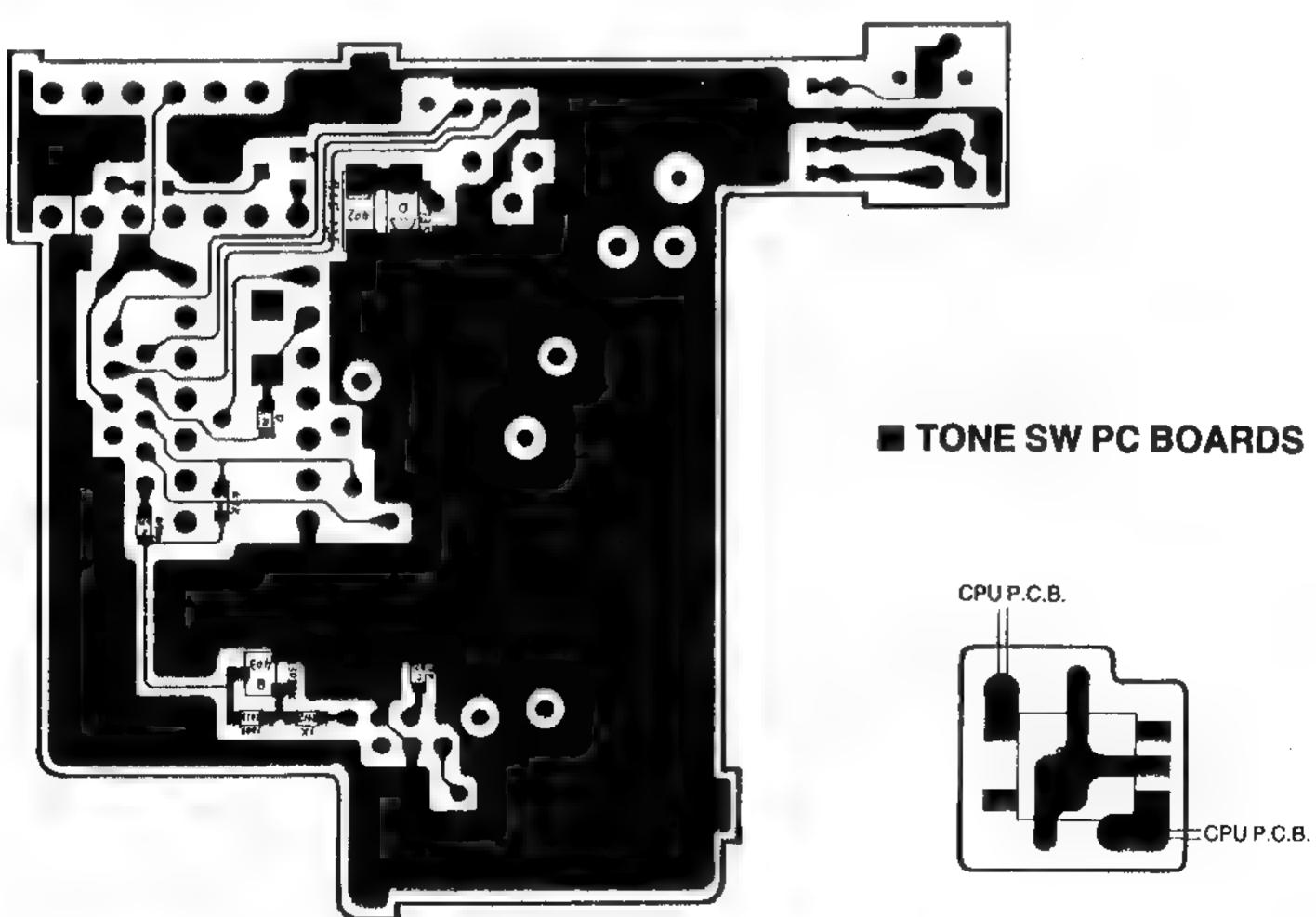


■ SCHEMATIC DIAGRAM OF RF UNIT



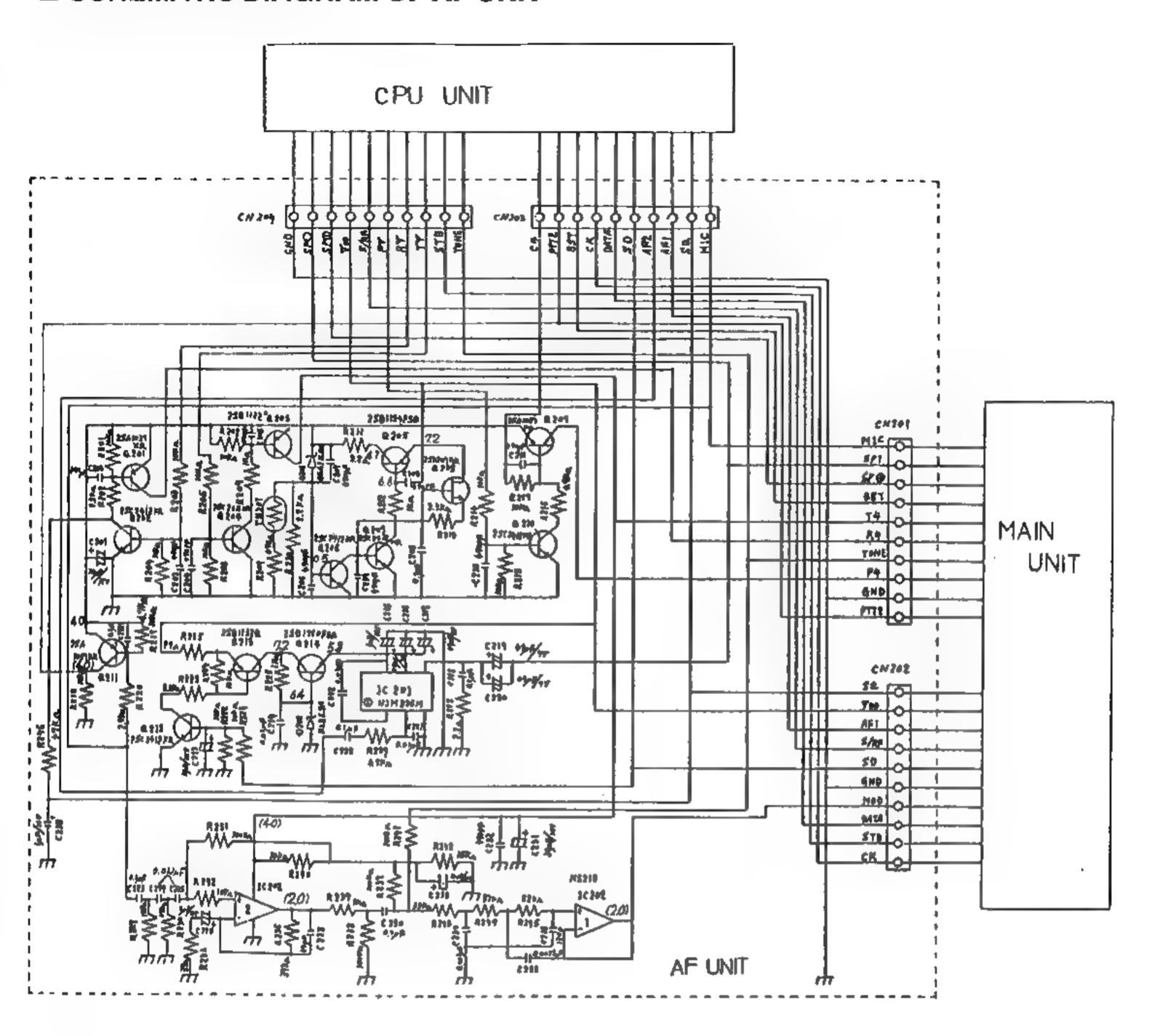
■ RF PC BOARDS



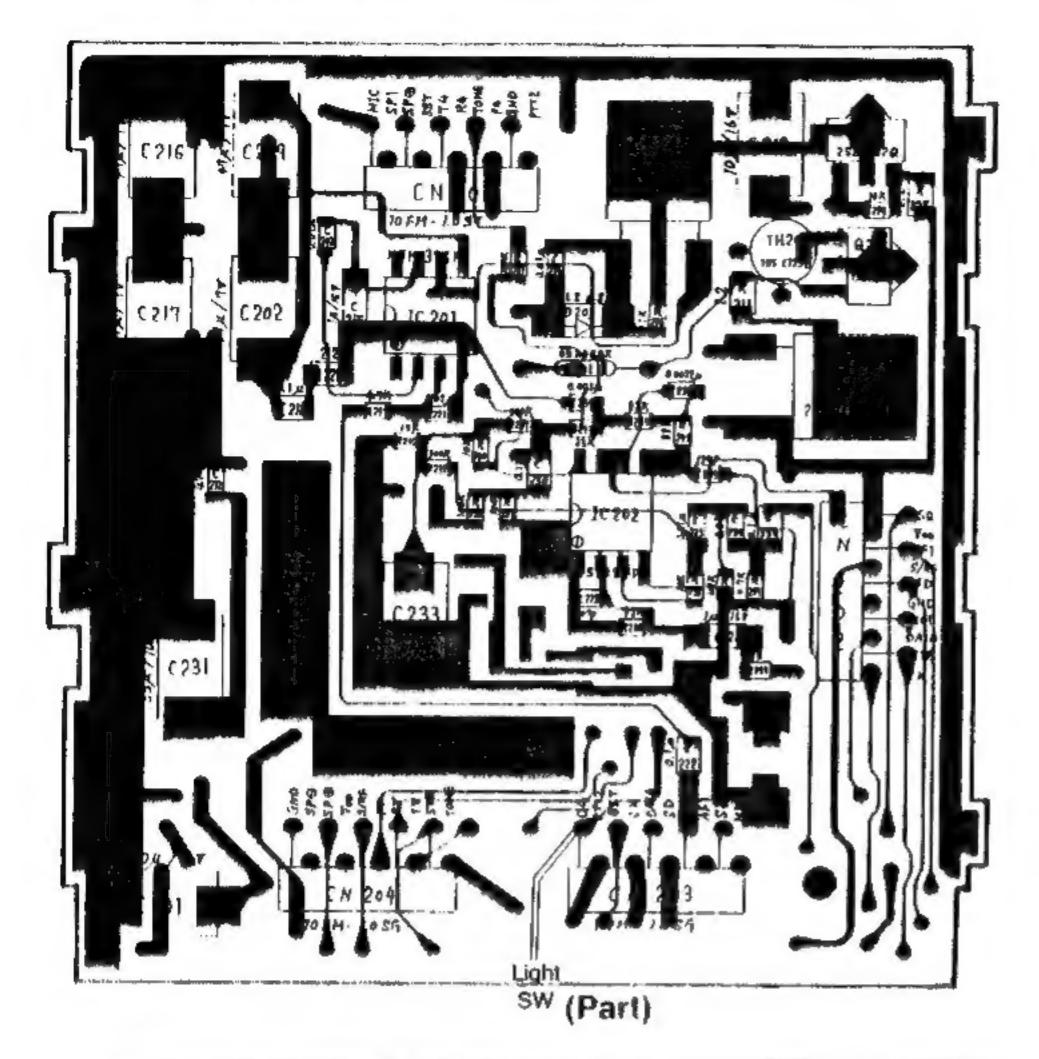


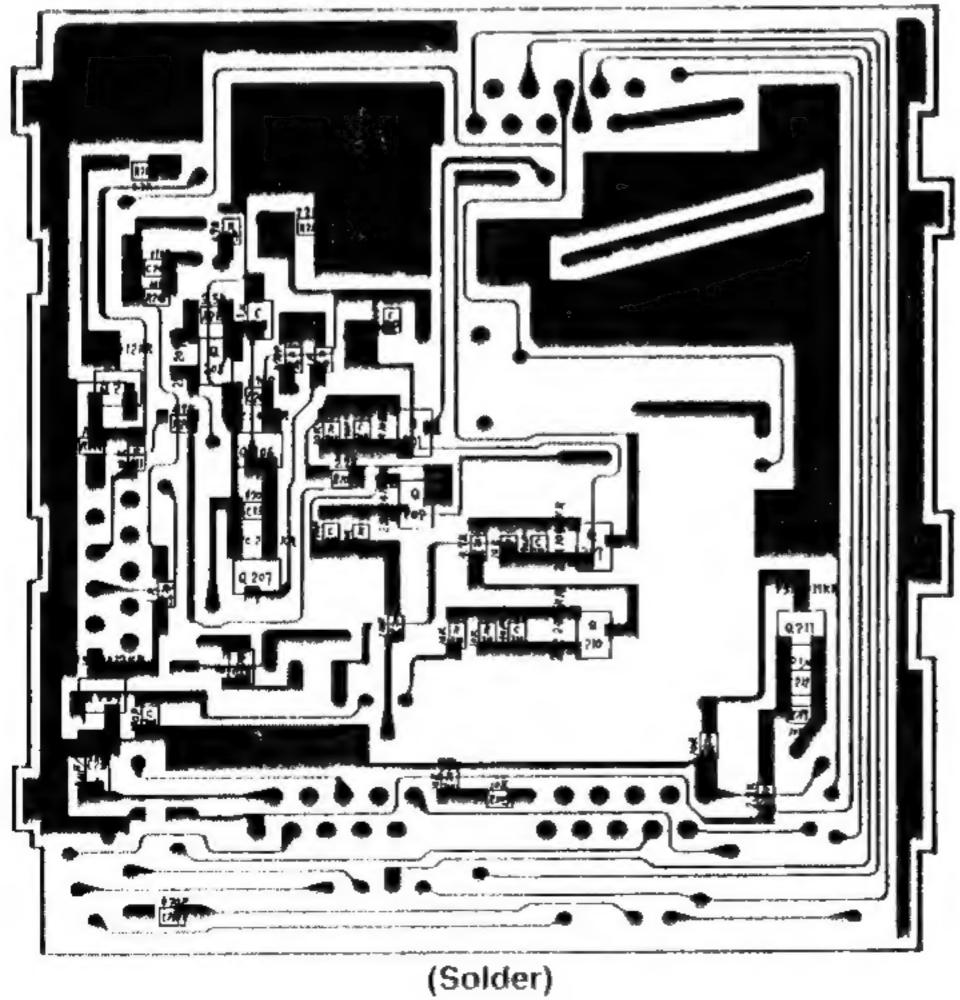
(Solder)

■ SCHEMATIC DIAGRAM OF AF UNIT

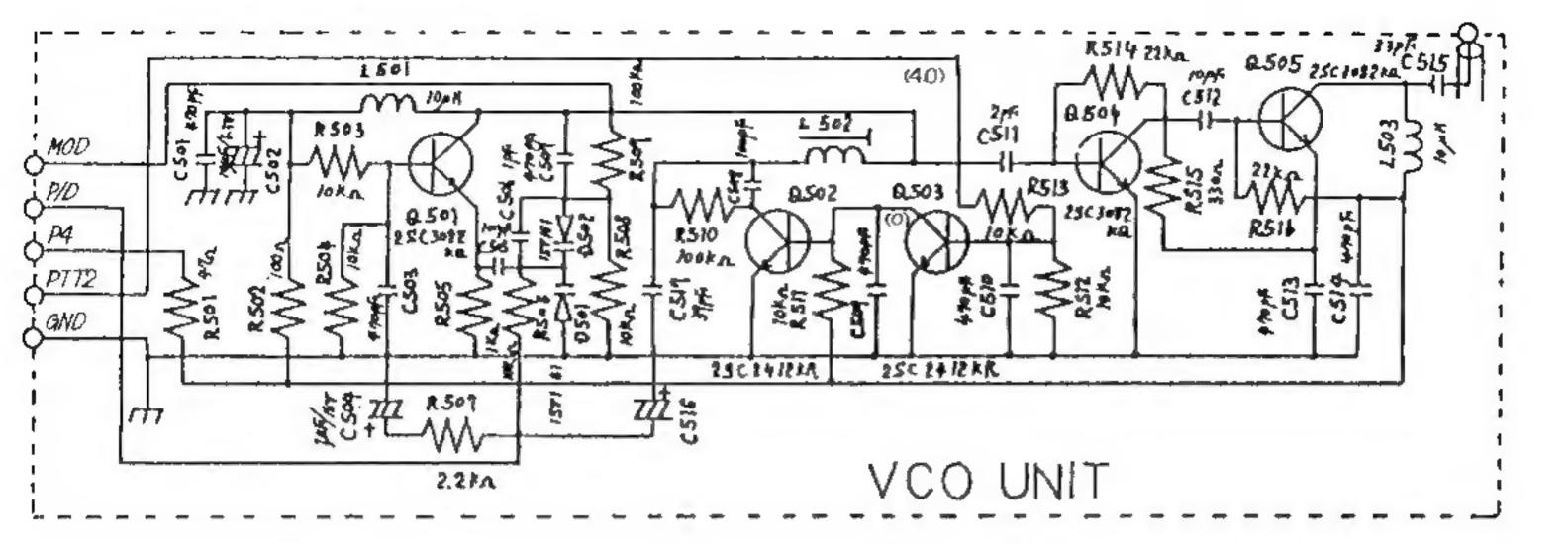


AFPC BOARDS

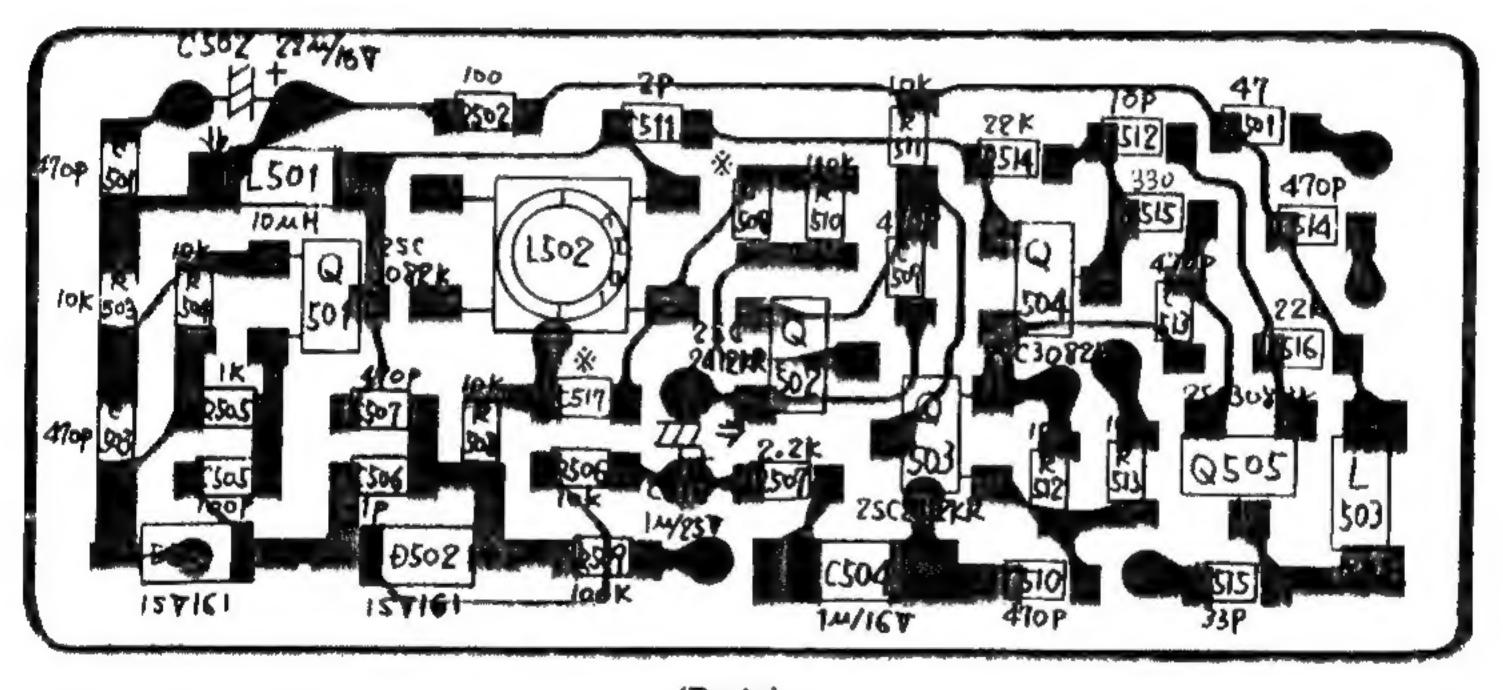




SCHEMATIC DIAGRAM OF VCO UNIT

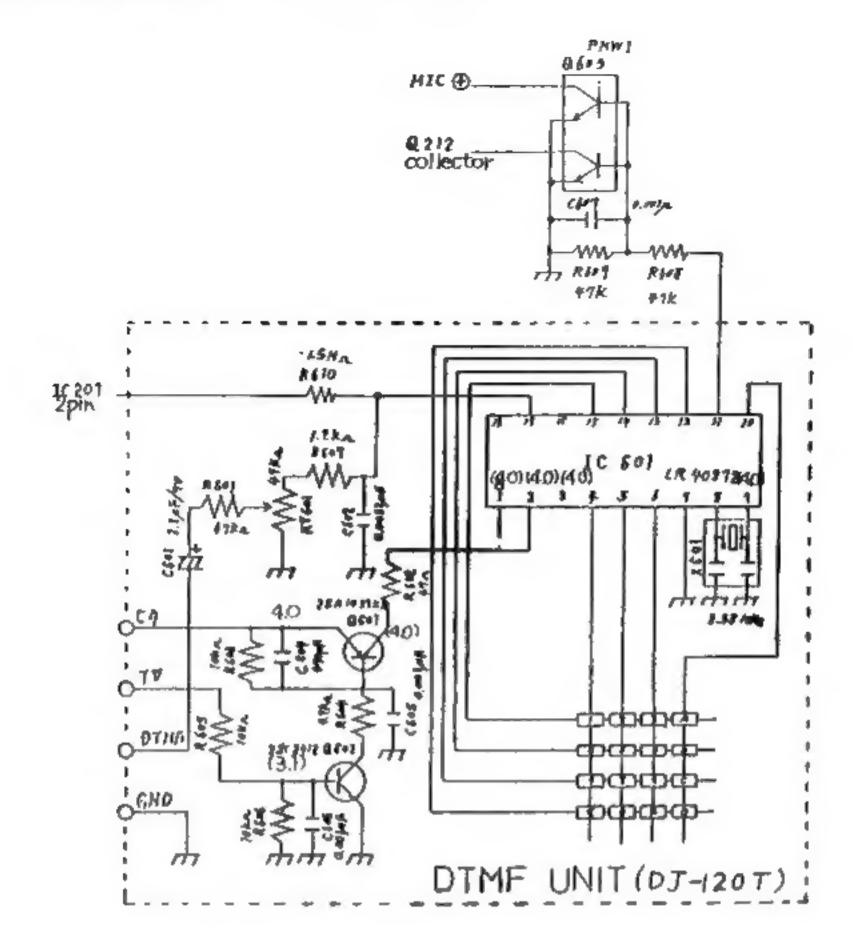


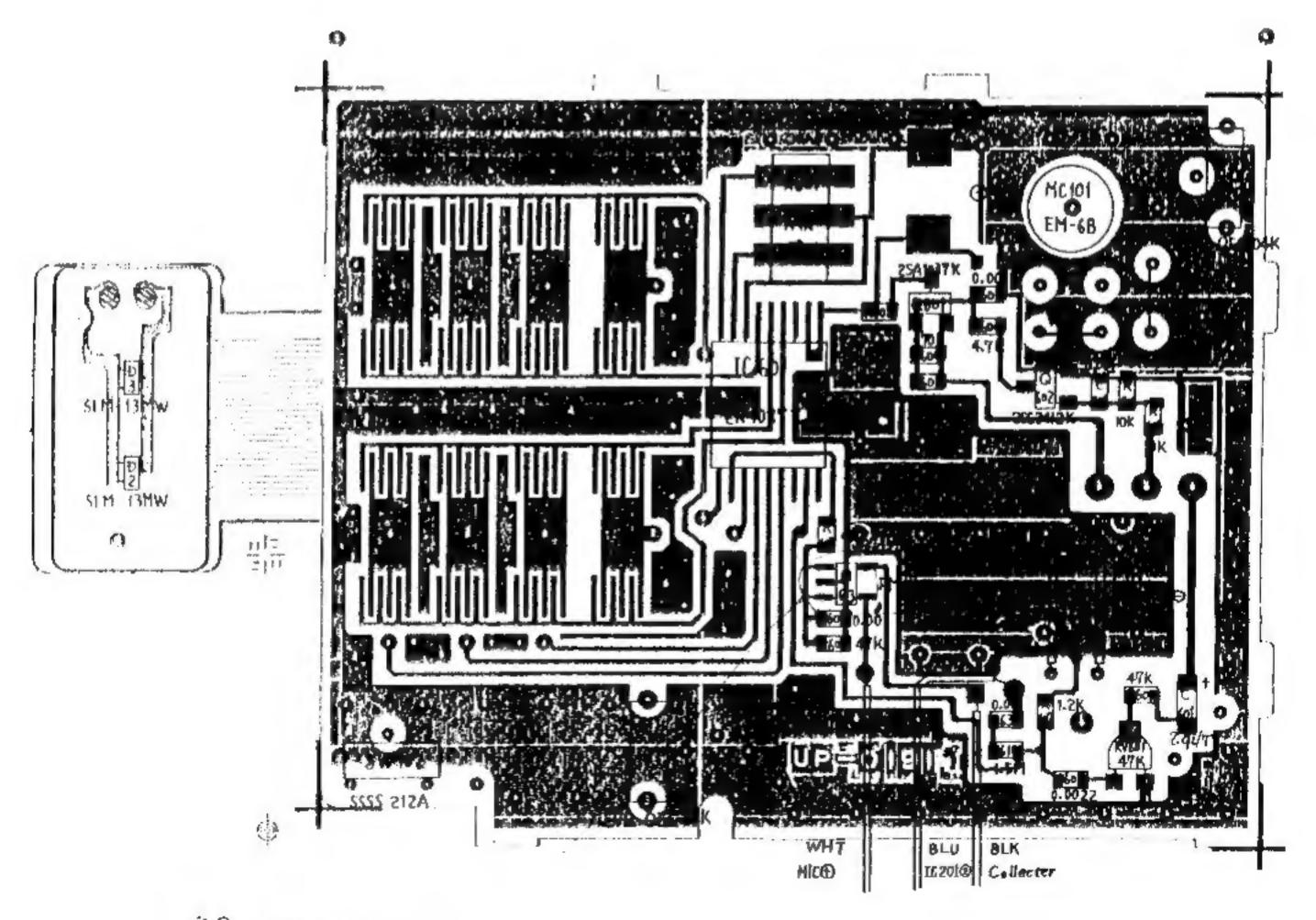
VCO PC BOARDS



(Parts)

SCHEMATIC DIAGRAM OF DTMF UNIT





&3 - QUENTEDE

ALINCO ELECTRONICS INC.

Head Office: "TWIN 21" MID Tower Building 23F

1-61, 2-Chome, Shiromi, Higashi-ku, Osaka No. 540, Japan

Factory: 1-1-1, Mishimae, Takatsuki, Osaka No. 569, Japan

ALINCO ELECTRONICS INC.

438 Amapola Avenue, Unit 130, Torrance CA90501, U.S.A.

Phone: 213-618-8616

Dealer/Distributor